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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 80

[EPA-HQ-OAR-2010-0133; FRL-9614-4]

RIN 2060-AQ76

Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Under the Clean Air Act Section 211(o), the Environmental Protection Agency is required to set the renewable fuel standards each November for the following year. In general the standards are designed to ensure that the applicable volumes of renewable fuel specified in the statute are used. However, the statute specifies that EPA is to project the volume of cellulosic biofuel production for the upcoming year and must base the cellulosic biofuel standard on that projected volume if it is less than the applicable volume set forth in the Act. EPA is today finalizing a projected cellulosic biofuel volume for 2012 and annual percentage standards for cellulosic biofuel, biomass-based diesel, advanced biofuel, and renewable fuels that will apply to

all gasoline and diesel produced or imported for domestic use in year 2012. In the NPRM we also proposed an applicable volume of 1.28 billion gallons for biomass-based diesel for 2013. The statute specifies that the minimum volume of biomass-based diesel for years 2013 and beyond must be at least 1.0 billion gallons. We are continuing to evaluate the many comments on the NPRM from stakeholders, and will issue a final rule setting the applicable biomass-based diesel volume for calendar year 2013 as expeditiously as practicable. This action also presents a number of changes to the RFS2 regulations that are designed to clarify existing provisions and to address several unique circumstances that have come to light since the RFS2 program became effective on July 1, 2010. Finally, today's rule also makes a minor amendment to the gasoline benzene regulations regarding inclusion of transferred blendstocks in a refinery's early benzene credit generation calculations.

DATES: This final rule is effective on **[insert date of publication in the Federal Register]**.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2010-0133. All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday

through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

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SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

Entities potentially affected by this proposed rule are those involved with the production, distribution, and sale of transportation fuels, including gasoline and diesel fuel or renewable fuels such as ethanol and biodiesel. Potentially regulated categories include:

Category	NAICS ¹ Codes	SIC ² Codes	Examples of Potentially Regulated Entities
Industry	324110	2911	Petroleum Refineries
Industry	325193	2869	Ethyl alcohol manufacturing
Industry	325199	2869	Other basic organic chemical manufacturing
Industry	424690	5169	Chemical and allied products merchant wholesalers
Industry	424710	5171	Petroleum bulk stations and terminals
Industry	424720	5172	Petroleum and petroleum products merchant wholesalers
Industry	454319	5989	Other fuel dealers

¹ North American Industry Classification System (NAICS)

² Standard Industrial Classification (SIC) system code.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this final action. This table lists the types of entities that EPA is now aware could potentially be regulated by this final action. Other types of entities not listed in the table could also be regulated. To determine whether your activities will be regulated by this final action, you should carefully examine the applicability criteria in 40 CFR part 80. If you have any questions regarding the applicability of this final action to a particular entity, consult the person listed in the preceding section.

Outline of this preamble

I. EXECUTIVE SUMMARY

A. Standards for 2012

1. Assessment of 2012 Cellulosic Biofuel Volume
2. Advanced Biofuel and Total Renewable Fuel in 2012
3. Percentage Standards for 2012
4. Historical Renewable Fuel Production

B. Regulatory Changes

C. 2012 Price for Cellulosic Biofuel Waiver Credits

D. Assessment of the Domestic Aggregate Compliance Approach

E. Assessment of the Canadian Aggregate Compliance Approach

II. PROJECTION OF CELLULOSIC VOLUME AND ASSESSMENT OF BIOMASS-BASED DIESEL AND ADVANCED BIOFUEL FOR 2012

A. Statutory Requirements

B. Cellulosic Biofuel Volume Assessment

1. Existing Cellulosic Biofuel Facilities
2. Potential New Facilities in 2012
3. Imports of Cellulosic Biofuel
4. Projections from the Energy Information Administration
5. Comments on the Proposed Rule

- 6. Summary of Volume Projections
- C. Advanced Biofuel and Total Renewable Fuel in 2012
- D. Biomass-Based Diesel in 2012

III. FINAL PERCENTAGE STANDARDS FOR 2012

- A. Background
- B. Calculation of Standards
 - 1. How Are the Standards Calculated?
 - 2. Small Refineries and Small Refiners
 - 3. Final Percentage Standards

IV. CHANGES TO RFS2 REGULATIONS

- A. Summary of Amendments
- B. Technical Justification for Equivalence Value Application
- C. Changes to Definitions of Terms
 - 1. Definition of Annual Cover Crop
 - 2. Definition of "Naphtha"
- D. Technical Amendments Related to RIN Generation and Separation
 - 1. RIN Separation Limit for Obligated Parties
 - 2. RIN Retirement Provision for Error Correction
 - 3. Production Outlook Reports Submission Deadline
 - 4. Attest Procedures
- E. Technical Amendments Related to Registration & Recordkeeping

1. Construction Discontinuance & Completion Documentation
 2. Third-Party Engineering Reviews
 3. Foreign Ethanol Producers
- F. Additional Amendments and Clarifications
1. Third-Party Engineering Review Addendum
 2. RIN Generation for Fuel Imported from a Registered Foreign Producer
 3. Bond Posting
 5. Acceptance of Separated Yard Waste and Food Waste Separation Plans
 6. Transferred Blendstocks in Early Benzene Credit Generation Calculations

V. ANNUAL ADMINISTRATIVE ANNOUNCEMENTS

- A. 2011 Price for Cellulosic Biofuel Waiver Credits
- B. Assessment of the Domestic Aggregate Compliance Approach
- C. Assessment of the Canadian Aggregate Compliance Approach

VI. COMMENTS OUTSIDE THE SCOPE OF THIS RULEMAKING

VII. PUBLIC PARTICIPATION

VIII. STATUTORY AND EXECUTIVE ORDER REVIEWS

- A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563:
Improving Regulation and Regulatory Review
- B. Paperwork Reduction Act

- C. Regulatory Flexibility Act
- D. Unfunded Mandates Reform Act
- E. Executive Order 13132: Federalism
- F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
- G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
- H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
- I. National Technology Transfer Advancement Act
- J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- K. Congressional Review Act

IX. STATUTORY AUTHORITY

I. Executive Summary

The Renewable Fuel Standard (RFS) program began in 2006 pursuant to the requirements in Clean Air Act (CAA) section 211(o) which were added through the Energy Policy Act of 2005 (EPAAct). The statutory requirements for the RFS program were subsequently modified through the Energy Independence and Security Act of 2007 (EISA), resulting in the promulgation of revised regulatory requirements on March 26, 2010¹. The transition from the RFS1 requirements of EPAAct to the RFS2 requirements of EISA generally occurred on July 1, 2010.

Under RFS2, EPA is required to determine and publish the applicable annual percentage standards for each compliance year by November 30 of the previous year. As part of this effort, EPA must determine the projected volume of cellulosic biofuel production for the following year. If the projected volume of cellulosic biofuel production is less than the applicable volume specified in section 211(o)(2)(B)(i)(III) of the statute, EPA must lower the applicable volume used to set the annual cellulosic biofuel percentage standard to the projected volume of production. When we lower the applicable volume of cellulosic biofuel in this manner, we are also authorized to lower the applicable volumes of advanced biofuel and/or total renewable fuel by the same or a lesser amount. Since these evaluations are based on evolving information about emerging segments of the biofuels industry, and may result in the applicable volumes differing from those in the statute, we believe that it is appropriate to establish the applicable volumes through a notice-and-comment rulemaking process. Today's notice provides our final evaluation of the projected production of cellulosic biofuel for 2012, our evaluation of whether to lower the applicable volumes of advanced biofuel and total renewable fuel, and the final percentage

¹ 75 FR 14670

standards for compliance year 2012. We are finalizing a cellulosic biofuel requirement of 10.45 mill ethanol-equivalent gallons for 2012, and are not reducing the advanced biofuel or total renewable fuel requirements below the levels specified in the statute. For future years, EPA will continue to evaluate whether it is appropriate to adjust the volume of advanced and total renewable fuel, if EPA adjusts the volume of cellulosic biofuel. In making such determinations, EPA will consider all relevant factors. The evaluations that led to these 2012 volume requirements were based on our evaluation of individual producers' production plans and progress, a consideration of comments received in response to our notice of proposed rulemaking published on July 1, 2011², the estimate of projected biofuel volumes that the Energy Information Administration (EIA) is required to provide to EPA by October 31, and other information that became available.

Today's final rule does not include an assessment of the environmental impacts of the percentage standards we are setting for 2012. All of the impacts of the RFS2 program were addressed in the RFS2 final rule published on March 26, 2010, including impacts of the biofuel standards specified in the statute. Today's rulemaking simply sets the standards for 2012 whose impacts were already analyzed previously.

Today's notice also finalizes a number of changes to the RFS2 regulations. These changes are designed to reduce confusion among regulated parties and streamline implementation by clarifying certain terms and phrases and addressing unique circumstances that came to light after the RFS2 program went into effect on July 1, 2010. Additionally, this notice also makes a minor amendment to the gasoline benzene regulations regarding inclusion of

² 76 FR 38844

transferred blendstocks in a refinery's early benzene credit generation calculations. Further discussion of all of these changes can be found in Section IV.

Finally, in today's rulemaking we are announcing the price for cellulosic biofuel waiver credits that will be available for compliance with the 2012 cellulosic biofuel requirement, and are also announcing the results of our annual assessment of the aggregate compliance approach for U.S. crops and crop residue. These announcements are provided in Section V.

EPA is required to determine the applicable volume of biomass-based diesel (BBD) that will be required in 2013 and beyond based on consideration of a variety of factors, and promulgate regulations establishing the volumes. The statute specifies that the volume of biomass-based diesel for years 2013 and beyond must be at least 1 billion gallons. In the NPRM we proposed an applicable volume of 1.28 billion gallons for BBD for 2013. We are continuing to evaluate the many comments on the NPRM from stakeholders as well as fulfilling other analytical requirements. In determining the BBD applicable volume, the statute requires an analysis of the impact of the BBD volume on a variety of factors such as the impact of BBD on energy security, transportation fuel costs, job creation, water quality, and other factors. EPA intends to gather additional information to enhance our analysis of these factors including consideration of costs and benefits consistent with the provisions of E.O. 13563, to ensure an appropriately balanced decision. For these reasons, we are not finalizing an applicable volume for 2013 BBD in today's rulemaking. We recognize that the statute calls for EPA to promulgate the applicable volume of BBD for 2013 no later than 14 months before that year. We do intend

to issue a final determination setting the applicable BBD volume for calendar year 2013 as expeditiously as practicable.

A. Standards for 2012

1. Assessment of 2012 Cellulosic Biofuel Volume

To estimate the volume of cellulosic biofuel that can be made available in the U.S. in 2012, we researched all potential production sources by company and facility. This included sources that were still in the planning stages, those that were under construction, and those that are already producing some volume of cellulosic ethanol, cellulosic diesel, or some other type of cellulosic biofuel. Facilities primarily focused on research and development work with no intention of marketing any fuel produced were not considered for this assessment. From this universe of potential cellulosic biofuel sources we identified the subset that had a possibility of producing some volume of qualifying cellulosic biofuel for use as transportation fuel in 2012.

In today's final rule we specify the projected available volume for 2012 that forms the basis for the percentage standard for cellulosic biofuel. To arrive at this final volume, we took into consideration additional factors such as the current and expected state of funding, the status of the technology, progress towards construction and production goals, and other significant factors that could potentially impact fuel production or the ability of the produced fuel to generate cellulosic Renewable Identification Numbers (RINs). We also considered projections

of cellulosic biofuel provided by the EIA. Further discussion of these factors can be found in Section II.B.

In our assessment we focused on domestic sources of cellulosic biofuel. While imports of cellulosic biofuels are possible and could be eligible to generate RINs, we believe this is unlikely due to local demand for cellulosic biofuels in the countries in which they are produced as well as the cost associated with transporting these fuels to the U.S. Of the domestic sources, we estimated that six facilities can make volumes of cellulosic biofuel available for transportation use in the U.S. in 2012. These facilities are listed in Table I.A.1-1 along with our estimate of the projected 2012 volume for each.

Table I.A.1-1

Projected Available Cellulosic Biofuel Plant Volumes for 2012

Company	Location	Fuel type	Projected available volume (million ethanol-equivalent gallons)
American Process Inc.	Alpena, MI	Ethanol	0.5
Fiberight	Blairstown, IA	Ethanol	2.0
INEOS Bio	Vero Beach, FL	Ethanol	3.0
KiOR	Columbus, MS	Gasoline, Diesel	4.8
KL Energy Corp.	Upton, WY	Ethanol	0.1
ZeaChem	Boardman, OR	Ethanol	0.05
Total			10.45

Each of the facilities listed in the Table I.A.1-1 are at different points in their progress towards the production of commercial volumes of cellulosic biofuel. KL Energy Corp. is the only facility in the United States currently generating cellulosic biofuel RINs. American Process Inc., Fiberight, and ZeaChem all anticipate completing construction on their production facilities in late 2011 or early 2012 and plan to begin producing biofuel soon after their facilities are complete. INEOS Bio and KiOR are targeting April 2012 and mid 2012 for the start-up of their respective cellulosic biofuel production facilities. The variation in these expected start-up times, along with the facility production capacities, company production plans, and a variety of other factors have all been taken into account in projecting the available volume of cellulosic biofuel from each these facilities.

2. Advanced Biofuel and Total Renewable Fuel in 2012

The statute indicates that we may reduce the applicable volume of advanced biofuel and total renewable fuel if we determine that the projected volume of cellulosic biofuel production for 2012 falls short of the statutory volume of 500 million gallons. As shown in Table I.A.1-1, we have determined that this is the case. Therefore, we also must evaluate the need to lower the applicable volumes for advanced biofuel and total renewable fuel.

To address the need to lower the advanced biofuel standard, we first consider whether it appears likely that the biomass-based diesel volume of 1.0 billion gallons specified in the statute can be met in 2012. As discussed in Section II.E, we believe that the 1.0 billion gallon standard can indeed be met. Since biodiesel has an Equivalence Value of 1.5, 1.0 billion physical gallons of biodiesel would provide 1.5 billion ethanol-equivalent gallons that can be counted towards the advanced biofuel standard of 2.0 billion gallons. Of the remaining 0.5 billion gallons, 10.45 million gallons will be met with cellulosic biofuel. Based on our analysis as described in Section II.C, we believe that there will be sufficient volumes of other advanced biofuels, such as imported sugarcane ethanol, additional biodiesel, or renewable diesel, such that the applicable volume for advanced biofuel can remain at the statutory level of 2.0 billion gallons. In addition, as discussed in Section II.C, we believe there will be sufficient volumes to satisfy the 15.2 billion gallon applicable volume of total renewable fuel specified in the Act, so the 2012 total renewable fuel percentage standard is based on that volume.

3. Percentage Standards for 2012

The renewable fuel standards are expressed as a volume percentage, and are used by each refiner, blender or importer to determine their renewable fuel volume obligations. The applicable percentages are set so that if each regulated party meets the percentages, and if EIA projections of gasoline and diesel use are accurate, then the amount of renewable fuel, cellulosic biofuel, biomass-based diesel, and advanced biofuel used will meet the volumes required on a nationwide basis.

To calculate the percentage standard for cellulosic biofuel for 2012, we have used the projected annual volume of 10.45 million ethanol-equivalent gallons (representing 8.65 million physical gallons). The applicable volumes for biomass-based diesel, advanced biofuel, and total renewable fuel for 2012 will be those specified in the statute. These volumes are shown in Table I.A.3-1.

Table I.A.3-1

Final Volumes for 2012

	Actual Volume	Ethanol Equivalent Volume ^a
Cellulosic biofuel	8.65 mill gal	10.45 mill gal
Biomass-based diesel	1.0 bill gal	1.5 bill gal
Advanced biofuel	1.3 - 1.5 ^b bill gal	2.0 bill gal
Renewable fuel	14.5 - 14.7 ^b bill gal	15.2 bill gal

^a Biodiesel and cellulosic diesel have equivalence values of 1.5 and 1.7 ethanol equivalent gallons respectively. As a result, ethanol-equivalent volumes are larger than actual volumes for cellulosic biofuel and biomass-based diesel.

^b Range depends on the equivalence values of advanced biofuels other than cellulosic biofuel and biomass-based diesel.

Four separate standards are required under the RFS2 program, corresponding to the four separate volume requirements shown in Table I.A.3-1. The specific formulas we use to calculate the renewable fuel percentage standards are contained in the regulations at §80.1405 and repeated in Section III.B.1. The percentage standards represent the ratio of renewable fuel volume to projected non-renewable gasoline and diesel volume. The projected volume of transportation gasoline and diesel used to calculate the standards in today's final rule was provided by EIA³.

³ Letter from Howard K. Gruenspecht, Acting Administrator, Energy Information Administration, to Lisa P. Jackson, Administrator, EPA. October 19, 2011.

In March 2011, DOE evaluated the impacts of the RFS program on small entities and concluded that some small refineries would suffer a disproportionate economic hardship if required to participate in the program⁴. As a result, we are required to exempt these few refineries from being obligated parties for a minimum of two years (2011 and 2012), and must also exempt their gasoline and diesel volumes from the calculation of the annual percentage standards. In addition, EPA has approved a number of individual small refinery petitions submitted pursuant to 40 CFR §80.1441(e)(2) since publication of the proposed rule, and has also adjusted the final 2012 percentage standards to reflect the exemption of these small refineries from being RFS obligated parties in 2012. The final standards for 2012 are shown in Table I.A.3-2 and include the adjustment for exempt small refineries (which constitute about 3.6% of the gasoline pool and 4.5% of the diesel pool). Detailed calculations can be found in Section III.

Table I.A.3-2

Final Percentage Standards for 2012

Cellulosic biofuel	0.006%
Biomass-based diesel	0.91%
Advanced biofuel	1.21%
Renewable fuel	9.23%

⁴ "Small Refinery Exemption Study: An Investigation into Disproportionate Economic Hardship," U.S. Department of Energy, March 2011.

4. Historical Renewable Fuel Production

To provide a comparison to the 2012 volume requirements shown in Table I.A.3-1, we determined the actual annual production volumes for the four RFS categories of renewable fuel. Since data on 2011 production is currently incomplete, we have shown the production volumes for the full year beginning in July 2010 and ending in June 2011. July 2010 also marks the start of the RFS2 program when data collection began with the EPA-Moderated Transaction System (EMTS) on production of renewable fuel and generation of RINs.

Table I.A.4-1

Production of Renewable Fuel from July 2010 - June 2011^a

	Actual Volume	Ethanol Equivalent Volume ^a
Cellulosic biofuel	0 mill gal	0 mill gal
Biomass-based diesel	0.43 ^b bill gal	0.64 ^b bill gal
Advanced biofuel	0.47 bill gal	0.70 bill gal
Renewable fuel	14.05 bill gal	14.29 bill gal

^a Except for biomass-based diesel, data derived from the EPA-Moderated Transaction System (EMTS) at <http://www.epa.gov/otaq/fuels/rfsdata/index.htm>

^b Due to ongoing investigations of biodiesel RIN generation, these values have been derived from Census Bureau data on fats and oils at http://www.census.gov/manufacturing/cir/historical_data/m311k/index.html

B. Regulatory Changes

In today's action we are also finalizing a number of changes to the RFS2 regulations.

These changes are intended to:

- Clarify certain provisions because we have learned that there is some confusion among some regulated parties
- Clarify the application of certain provisions to unique circumstances
- Provide greater specificity in the definition of certain terms
- Correct regulatory language that inadvertently misrepresented our intent

Today's rule also makes a minor amendment to the gasoline benzene regulations regarding inclusion of transferred blendstocks in a refinery's early benzene credit generation calculations.

A detailed discussion of these regulatory changes is provided in Section IV.

C. 2012 Price for Cellulosic Biofuel Waiver Credits

Since we are reducing the required volume of cellulosic biofuel for 2012 below the applicable volume specified in the statute, EPA is required to offer biofuel waiver credits to obligated parties that can be purchased in lieu of acquiring cellulosic biofuel RINs⁵. These waiver credits are not allowed to be traded or banked for future use, are only allowed to be used

⁵ One waiver credit would apply to one gallon of an obligated party's cellulosic biofuel Renewable Volume Obligation (RVO).

to meet the 2012 cellulosic biofuel standard, and cannot be applied to deficits carried over from 2011. Moreover, unlike cellulosic biofuel RINs, waiver credits may not be used to meet either the advanced biofuel standard or the total renewable fuel standard. For the 2012 compliance period, we are making cellulosic biofuel waiver credits available to obligated parties for end-of-year compliance should they need them at a price of \$0.78 per credit. Further discussion is provided in Section VI.A.

D. Assessment of the Domestic Aggregate Compliance Approach

As part of the RFS2 regulations, EPA established an aggregate compliance approach for renewable fuel producers who use planted crops and crop residue from U.S. agricultural land. This compliance approach relieved such producers (and importers of such fuel) of the individual recordkeeping and reporting requirements otherwise required of producers and importers to verify that feedstocks used in the production of RIN-qualifying renewable fuel meet the definition of renewable biomass. EPA determined that 402 million acres of U.S. agricultural land was available in 2007 (the year of EISA enactment) for production of crops and crop residue that would meet the definition of renewable biomass, and determined that as long as this total number of acres is not exceeded, it is unlikely that new land has been devoted to crop production based on historical trends and economic considerations. We indicated that we would conduct an annual evaluation of total U.S. acreage that is cropland, pastureland, or conservation reserve program land, and that if the value exceed 402 million acres, producers using domestically-grown crops or crop residue to produce renewable fuel would be subject to

individual recordkeeping and reporting to verify that their feedstocks meet the definition of renewable biomass.

The RFS2 regulations provide that EPA will make a finding concerning whether the 2007 baseline amount of U.S. agricultural land has been exceeded in a given year and will publish this finding in the Federal Register by November 30 of the same year. Based on data provided by the USDA, we have estimated that U.S. agricultural land reached 392 million acres in 2011, and thus did not exceed the 2007 baseline acreage.

We also stated in the preamble to the final RFS2 rule that if, at any point, EPA finds that the total agricultural land is greater than 397 million acres, EPA will conduct further investigations to evaluate validity of the domestic aggregate compliance approach. The total acreage estimate of 392 million acres does not exceed the trigger point for further investigation; therefore EPA does not plan to conduct further investigations into this matter. Additional discussion on this matter can be found in Section V.B of this preamble.

E. Assessment of the Canadian Aggregate Compliance Approach

On September 29, 2011, EPA approved the use of an aggregate compliance approach to renewable biomass verification for planted crops and crop residue grown in Canada. On March 15, 2011, EPA issued a notice of receipt of and solicited public comment on a petition for EPA to authorize the use of an aggregate approach for compliance with the Renewable Fuel Standard

renewable biomass requirements, submitted by the Government of Canada. The petition requested that EPA determine that an aggregate compliance approach will provide reasonable assurance that planted crops and crop residue from Canada meet the definition of renewable biomass.

The Government of Canada utilized several types of land use data to demonstrate that the land included in their 124 million acre baseline is cropland, pastureland or land equivalent to U.S. Conservation Reserve Program land that was cleared or cultivated prior to December 19, 2007, and was actively managed or fallow and nonforested on that date (and is therefore RFS2 qualifying land). The total agricultural land in Canada in 2011 is estimated at 121 million acres. This data was presented to EPA in a report titled: *Changes to the Renewable Fuel Standard Program Aggregate Compliance for Canadian Crops and Crop Residues: Data Analysis and Justification Report 2011*. This report has been docketed at EPA-HQ-OAR-2010-0133. The total acreage estimate of 121 million acres does not exceed the trigger point for further investigation; therefore EPA does not plan to conduct further investigations into this matter. Additional discussion on this matter can be found in Section V.B of this preamble.

II. Projection of Cellulosic Volume and Assessment of Biomass-Based Diesel and Advanced Biofuel for 2012

In order to project production volume of cellulosic biofuel in 2012 for use in setting the percentage standard, we collected information on individual facilities that have the potential to produce qualifying volumes for consumption as transportation fuel, heating oil, or jet fuel in the U.S. in 2012. This section describes the projected available volume of cellulosic biofuel in 2012 as well as some of the uncertainties associated with those volumes. Section III describes the derivation of the percentage standards that will apply to obligated parties in 2012.

The 2012 volume projections in today's final rule were based on several sources of information:

- An estimate from EIA of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel that they project will be sold or introduced into commerce in the U.S. in 2012.
- Progress that the cellulosic biofuel industry is making in 2011
- Our own assessment of the cellulosic biofuel industry's projected volumes for 2012
- Comments in response to the NPRM

In addition to the sources of information listed above EPA had also intended to consider the Production Outlook Reports that are required under §80.1449 for all registered renewable

fuel producers and importers. These Production Outlook Reports were not as useful as EPA had hoped in helping to provide information on the intentions of cellulosic biofuel producers in 2012 as very few had registered under the RFS program and they were thus not required to submit a report. EPA expects that in future years as more cellulosic biofuel producers register under the RFS program these reports will become of greater value in helping to determine the appropriate projected available volume of cellulosic biofuel.

In directing EPA to project cellulosic biofuel production for purposes of setting the annual cellulosic biofuel standard, Congress did not specify what degree of certainty should be reflected in the projections. However, in response to the NPRM, some commenters cited Executive Order 13563 which states that regulations must in general "promote predictability and reduce uncertainty." We agree that this must be a goal in the process of determining the appropriate cellulosic biofuel requirement for 2012. The greatest certainty is achieved when the level of the standard is firmly established before it becomes applicable, and all regulated parties can have confidence regarding that standard. Doing this ensures that obligated parties know what their obligations will be so that they can begin efforts to meet those obligations, and biofuel producers know what baseline demand for their product will be so that they can secure financing and ramp up production with confidence.

In contrast to statements made by several obligated parties, meeting the dual goals of predictability and reducing uncertainty does not require EPA to specify an applicable volume for cellulosic biofuel that is as low as possible, or based only on demonstrated (as opposed to reasonably anticipated) production. Due to the availability of cellulosic waiver credits, obligated

parties always have the means to comply with the cellulosic biofuel standard that we set⁶, and at a cost that is predictable. There is, therefore, no uncertainty with regard to the level of their obligations or the means available to achieve it.

Moreover, Executive Order 13563 also states that regulations must in general promote "economic growth, innovation, competitiveness, and job creation," while "taking into account benefits and costs, both quantitative and qualitative." While the cellulosic biofuel standard that we set should be within the range of what can be attained based on projected domestic production and import potential, the standard that we set helps drive the production of volumes that will be made available. This is consistent with comments submitted by the Biotechnology Industry Organization and the Renewable Fuels Association. Thus while any standard we set for cellulosic biofuel standard for 2012 will have some uncertainty in terms of actual attainment, our intention is to balance such uncertainty with the objective of promoting growth in the industry. Our final projected available volume of 8.65 million gallons of cellulosic biofuel (10.45 million ethanol-equivalent gallons) for 2012 reflects these considerations.

A. Statutory Requirements

The volumes of renewable fuel to be used under the RFS2 program each year (absent an adjustment or waiver by EPA) are specified in CAA 211(o)(2). These volumes for 2012 are shown in Table II.A-1.

⁶ So long as the required volume is below the volume specified in the statute, such that cellulosic biofuel waiver credits are available.

Table II.A-1

Required Volumes in the Clean Air Act for 2012 (bill gal)

	Actual Volume	Ethanol Equivalent Volume
Cellulosic biofuel	0.5 ^a	0.5
Biomass-based diesel	1.0	1.5
Advanced biofuel	2.0 ^a	2.0
Renewable fuel	15.2 ^a	15.2

^a These values assume that the biofuels would be ethanol. If any portion of the biofuels used to meet these applicable volumes has a volumetric energy content greater than that for ethanol, these values will be lower.

By November 30 of each year, the EPA is required under CAA 211(o) to determine and publish in the Federal Register the renewable fuel percentage standards for the following year. These standards are to be based in part on transportation fuel volumes estimated by the EIA for the following year. The calculation of the percentage standards is based on the formulas in §80.1405(c) which express the required volumes of renewable fuel as a volume percentage of gasoline and diesel sold or introduced into commerce in the 48 contiguous states plus Hawaii.

The statute requires that if EPA determines that the projected volume of cellulosic biofuel production for the following year is less than the applicable volume shown in Table II.A-1, then EPA is to reduce the applicable volume of cellulosic biofuel to the projected volume available during that calendar year. In addition, if EPA reduces the required volume of cellulosic biofuel

below the level specified in the statute, the Act also indicates that we may reduce the applicable volume of advanced biofuels and total renewable fuel by the same or a lesser volume.

B. Cellulosic Biofuel Volume Assessment

In order to project cellulosic biofuel production for 2012, EPA has tracked the progress of over 100 biofuel production facilities. From this list of facilities we used publically available information, as well as information provided by DOE and USDA, to make a preliminary determination of which facilities are the most likely candidates to produce cellulosic biofuel and make it commercially available in 2012. Each of these companies was investigated further in order to determine the current status of their facilities and their likely cellulosic biofuel production volumes for the coming years. Information such as the funding status of these facilities, announced construction and production ramp up periods, and annual fuel production targets were taken into account. We also considered each company's history of meeting milestone targets and production goals where applicable. Our projection of the volume of cellulosic biofuel production in 2012 is based on this information as well as our own assessment of the likelihood of these facilities successfully producing cellulosic biofuel in the volumes indicated. A brief description of each of the companies we believe can produce cellulosic biofuel and make it commercially available in 2012 can be found below.

1. Existing Cellulosic Biofuel Facilities

The rule that established the required 2011 cellulosic biofuel volume identified five production facilities that we projected would produce cellulosic biofuel and make the fuel commercially available in 2011. Each of these production facilities are now structurally complete, however they are in various stages of biofuel production. All of these facilities have either produced some volume of cellulosic biofuel in 2011, or are on schedule to do so later in the year. Only KL Energy and Range Fuels, however, have completed registration of cellulosic biofuel production facilities under the RFS2 program and as such they are currently the only facilities of the five listed here currently eligible to generate cellulosic biofuel RINs. For more background information on each of these facilities see the 2011 standards rule⁷.

DuPont Danisco Cellulosic Ethanol (DDCE) successfully started up their small demonstration facility in Vonore, Tennessee in late 2010. This facility has a maximum production capacity of 250,000 gallons of ethanol per year and uses an enzymatic hydrolysis process to convert corn cobs into ethanol. In conversations with EPA in July 2011 DDCE indicated that this facility was currently producing ethanol at approximately half the nameplate capacity, corresponding to a volume of 125,000 gallons per year. The focus of this facility, however, remains gathering information to help successfully design and operate DDCE's first commercial scale facility. All the cellulosic ethanol currently produced at this facility is used for testing purposes or given away. No RINs are currently generated for this ethanol and it is not available for purchase by obligated parties. DDCE has indicated that they have no plans to generate RINs or sell ethanol produced at their facility in Vonore in 2012. No volume of

⁷ 75 FR 76790, December 9, 2010.

cellulosic ethanol has therefore been included in the projections of available cellulosic biofuel for 2012.

Fiberight uses an enzymatic hydrolysis process to convert the biogenic portion of separated municipal solid waste (MSW) into ethanol. Construction on the first stage of Fiberight's Blairstown, Iowa facility was completed in the summer of 2010. The production capacity of the first stage of this project is 2 million gallons of ethanol per year. Fiberight had planned to begin production of cellulosic biofuel from this facility in late 2010 but poor economic conditions, due in part to low cellulosic RIN values in 2010, caused them to postpone fuel production. Fiberight had also planned to begin construction on an expansion of this facility in late 2010 that would increase the production potential to 6 million gallons of ethanol per year, but were unable to secure funding to carry out the construction as planned. They have since secured funding and began construction on the expansion of their Blairstown facility in April 2011. Fiberight anticipates that they will begin fuel production in early 2012 and will ramp up production at this facility throughout 2012. EPA projects the production of 2 million gallons of cellulosic ethanol from this facility in 2012.

KiOR continues to produce a small volume of renewable crude from agricultural residue at their demonstration facility in Houston, Texas using a technology they call Biomass Catalytic Cracking (BCC). This technology uses heat and a proprietary catalyst to convert biomass to a renewable crude with a relatively low oxygen content. The renewable crude is then upgraded to produce renewable gasoline and diesel, as well as a small quantity of fuel oil. While KiOR plans to continue to operate their Houston facility in 2012 its main purpose will be to provide small

quantities of fuel for testing purposes and to provide data for the optimization of KiOR's first commercial facility. In conversations with EPA KiOR has indicated that it is unlikely that any significant volume of fuel from this facility will be sold commercially. EPA has therefore not included any volume from KiOR's Houston facility in our projected available volumes for 2012.

KL Energy has developed a process to convert cellulose and hemicellulose into cellulosic sugars using a thermal-mechanical pretreatment process followed by an enzymatic hydrolysis. It had initially planned to use woody biomass as their feedstock for cellulosic biofuel production; however its production process is versatile enough to allow for a wide variety of cellulosic feedstocks to be used. In August 2010 KL Energy announced a joint development agreement with Petrobras America Inc. As part of the agreement Petrobras has invested \$11 million to modify KL Energy's facility in Upton, Wyoming to allow it to process bagasse and other waste products. If successful, Petrobras and KL Energy plan to work together to integrate the technology into currently existing ethanol production facilities in Brazil. The modifications to KL Energy's facility were completed earlier this year. KL Energy is currently producing small volumes of cellulosic ethanol and plans to continue to do so throughout 2012. In August 2011 KL Energy successfully registered its cellulosic biofuel production facility under the RFS program making it eligible to generate RINs for biofuel produced from this facility. KL Energy has indicated to EPA its intent to generate RINs for the fuel it produces and to sell it commercially in the United States. EPA projects that 100,000 gallons of cellulosic ethanol will be available from this facility in 2012.

Range Fuels began production of methanol at their Soperton, Georgia facility in the third quarter of 2010. This facility uses a thermochemical technology to produce syngas (consisting of mostly hydrogen and carbon monoxide) from a woody biomass feedstock. The syngas is then converted into fuel with the aid of a chemical catalyst developed by Range. Range has developed the capability to produce both methanol and ethanol, depending on the catalyst used. In January 2011, after producing a small volume of ethanol from this facility and proving this capability, Range Fuels shut down the Soperton facility in order to work through technical difficulties they had been experiencing. No timeline has been given for the restart of this facility and fuel production from this facility in 2012 appears unlikely. No cellulosic fuel production from Range Fuels has been included in EPA's 2012 projected available volume.

2. Potential New Facilities in 2012

In the proposed rule EPA discussed five new cellulosic biofuel production facilities that had plans to begin commercial production at some point in 2012. These facilities were at various stages in the construction process, and as such had various degrees of uncertainty associated with any projected 2012 commercial production. Three of these facilities, those being developed by INEOS Bio, KiOR, and ZeaChem, have made significant progress towards completion and are expected to produce and market cellulosic biofuel in 2012. Two of the companies mentioned in the proposed rule, Fulcrum Bioenergy and Terrabon, are no longer on a schedule to produce cellulosic biofuel in 2012. Finally, EPA has become aware of a sixth company, American Process Inc., which is developing a cellulosic biofuel project that is likely to produce and market

some volume of cellulosic biofuel in 2012. The following section provides updated information on each of the companies discussed in the proposed rule, as well as a summary of the project being developed by American Process Inc.

Fulcrum Bioenergy is planning to build a facility capable of producing 10.5 million gallons of cellulosic ethanol and 16 megawatts of renewable electricity per year. It has developed a thermochemical technology to produce ethanol from separated MSW via syngas using a chemical catalyst. In November 2010 Fulcrum announced that it had received a term sheet for an \$80 million loan guarantee from DOE and was entering into the final phase of the loan guarantee program. Prior to that Fulcrum had announced that it had signed long term feedstock supply contracts for this facility as well as engineering, procurement, and construction contracts. In January 2011 Fulcrum announced it had closed on a \$75 million Series C financing that would provide the remaining necessary capital for the construction of its first commercial production facility pending the closing of its DOE loan guarantee. The loan guarantee, however, has yet to be finalized. As a result the start of the construction of this facility, originally planned for the second quarter of 2011, is now expected to begin in late 2011. EPA has not included any volume of cellulosic biofuel from Fulcrum Bioenergy's facility in our 2012 projected available volume because of this delay.

INEOS Bio has developed a process for producing cellulosic ethanol by first gasifying feedstock material into a syngas and then using naturally occurring bacteria to ferment the syngas into ethanol. In January 2011 USDA announced a \$75 million loan guarantee for the construction of INEOS Bio's first commercial facility to be built in Vero Beach, Florida. This

was in addition to the grant of up to \$50 million INEOS Bio received from DOE in January 2010. This facility will be capable of producing 8 million gallons of cellulosic biofuel as well as 6 megawatts of renewable electricity from a variety of feedstocks including yard, agricultural, and wood waste, as well as separated MSW. On February 9, 2011 INEOS Bio broke ground on this facility. Since February significant progress has been made and INEOS Bio remains on target to complete construction on this facility in April 2012. Commercial production of cellulosic ethanol is expected to begin soon after construction is complete. Three million gallons of cellulosic ethanol from this facility has been included in EPA's projected available volume for 2012.

After successful operation of their demonstration plant in Houston, Texas KiOR began construction on its first commercial scale facility in May 2011. This facility, located in Columbus, Mississippi, will convert biomass to a low oxygen biocrude using a process KiOR calls Biomass Catalytic Cracking (BCC). BCC uses a catalyst developed by KiOR in a process similar to Fluid Catalytic Cracking currently used in the petroleum industry. KiOR's Columbus facility will also be capable of upgrading this biocrude into finished gasoline and diesel as well as a small quantity of fuel oil. KiOR plans to finish construction on this facility in the first half of 2012 and begin commercial production early in the third quarter of 2012. KiOR has also announced plans to construct several more commercial scale biofuel production facilities in Mississippi and across the southeastern United States. It is unlikely any of these additional facilities will begin production of biofuel in 2012. EPA has included 3 million gallons of cellulosic biofuel (4.8 million ethanol equivalent gallons) from KiOR's Columbus facility in our projected available volume for 2012.

Terrabon completed construction of a small demonstration scale facility for the conversion of MSW and other waste materials into gasoline in 2010 and are currently developing plans for their first commercial scale facility. Terrabon utilizes a unique production process that can be used to produce gasoline, diesel, or jet fuel. Feedstock is first fermented into carboxylic acids by a variety of micro organisms. These carboxylic acids are then neutralized to form carboxylate salts that are dewatered, dried, and thermally converted to ketones. Finally, the ketones are hydrogenated to form alcohols which can then be refined into gasoline, diesel, or jet fuel. Terrabon had hoped to begin producing cellulosic biofuel at their first commercial scale facility some time in 2012, however difficulties in securing the necessary funding have delayed the expected start up of their first commercial scale facility to 2013. EPA has not included any volume of cellulosic biofuel from Terrabon in our 2012 projected available volume.

ZeaChem has begun construction on a small demonstration scale facility in Boardman, Oregon capable of producing 250,000 gallons of cellulosic ethanol per year. Its production process uses a combination of biochemical and thermochemical technologies to produce ethanol and other renewable chemicals from cellulosic materials. The feedstock is first fractionated into two separate streams containing cellulosic sugars and lignin. The cellulosic sugars are fermented into ethyl acetate using a naturally occurring acetogen, which can then be hydrogenated into ethanol. The hydrogen necessary for this process is produced by gasifying the lignin stream from the cellulosic biomass. ZeaChem's process is flexible and is capable of producing a wide range of renewable chemical and fuel molecules in addition to ethanol. ZeaChem received a grant of up to \$25 million from DOE in January 2010 for the construction of their demonstration

facility. Since then ZeaChem has made significant progress on its demonstration facility and currently plans to begin production of cellulosic ethanol from this facility in early 2012. It has indicated to EPA, however, that it is highly unlikely to achieve full production capacity at this facility in its first year of production and has suggested that the production of 50,000 gallons of cellulosic ethanol from this facility in 2012 is a more realistic expectation. Despite this small volume, ZeaChem does intend to generate RINs for the fuel that they produce and to market it commercially. Based on this information EPA has included 0.05 million gallons of cellulosic ethanol in our projected available volume for 2012.

American Process Inc. (API) is developing a project in Alpena, Michigan capable of producing up to 900,000 gallons of cellulosic ethanol per year from woody biomass. This facility will use a technology developed by API called GreenPower+™. This technology extracts the hemicelluloses portion of woody biomass using hot water and hydrolyzes it into cellulosic sugars. These cellulosic sugars are then converted to ethanol or other alcohols, while the remaining portion of the woody biomass, containing mostly cellulose and lignin, is processed into wood paneling at a co-located facility. At larger scale facilities API anticipates burning the residual biomass in a boiler to produce renewable steam and electricity as well as cellulosic biofuel. In January 2010 API received a grant from DOE for up to \$18 million for the construction of their demonstration facility. Construction of the Alpena, Michigan facility began in March 2011 and API anticipates beginning the production of cellulosic ethanol at this site early in 2012. API was not discussed as a potential producer of cellulosic biofuels in 2012 in our proposed rule due to uncertainty about its ability to generate RINs with the intended feedstock and production process. EPA anticipates these issues will be resolved. Cellulosic biofuel

produced at API's facility will therefore likely be eligible for cellulosic RINs. For our 2012 projected available volume of cellulosic biofuels we have included 500,000 gallons of cellulosic ethanol from this facility. This volume represents the low end of API's production target for that year due to the uncertainties associated with the start up of a new industrial facility utilizing a technology unproven at industrial scale.

Another potential source of cellulosic biofuel in 2012 is the application of a technology being developed by EdeniQ. EdeniQ is developing a suite of enzymes capable of breaking down cellulose into simple sugars that can then be fermented into ethanol. Rather than build its own production facilities EdeniQ plans to license its enzymes to existing corn ethanol facilities. Such licensing would be accompanied by the Cellunator, an advanced milling device EdeniQ has developed to reduce the particle size of corn kernels to enable greater conversion of starch to ethanol as well as the conversion of cellulose to simple sugars. EdeniQ claims that its technology would allow corn ethanol facilities to increase ethanol production by 1-2% by converting the cellulosic portion of the corn kernel into ethanol. EdeniQ is also working to increase the effectiveness of its enzymes in order to enable ethanol production increases of 3-4% from the cellulose in the corn kernel in the future. EdeniQ plans to begin commercial trials of its technology in the second half of 2011. This technology has the potential to be implemented rapidly and produce significant amounts of cellulosic ethanol in 2012 as it requires relatively small capital additions to already existing corn ethanol facilities. While this technology is promising, there is currently no pathway in the RFS2 regulations for the generation of cellulosic biofuel RINs using the cellulosic portion of the corn kernel as a feedstock. Moreover, EdeniQ has not announced any agreements with corn ethanol producers to install this technology to

enable the production of cellulosic ethanol. For these reasons, EPA has not included any cellulosic ethanol production from EdeniQ's technology in our 2012 projections.

In addition to the facilities mentioned above, EPA is also aware of three companies planning to begin the production of cellulosic biofuels in early 2013. Coskata, Enerkem, and Poet are planning on completing construction on their first commercial scale cellulosic biofuel facilities in late 2012 or early 2013 and producing commercial volumes of biofuels in 2013. While all of these facilities continue to make progress towards commercial production of cellulosic biofuel in 2013 it is highly unlikely that any of these facilities will be capable of producing cellulosic biofuels by the end of 2012. EPA has therefore not included any volume of cellulosic biofuel from these facilities in our projected available volume for 2012. These facilities, along with several other commercial cellulosic biofuel facilities planning to begin production in 2013, notably the first commercial scale facilities from Abengoa and Mascoma, indicate that the potential exists for the rapid expansion of production volumes in future years.

3. Imports of Cellulosic Biofuel

While domestically produced cellulosic biofuels are the most likely source of cellulosic biofuel available in the United States, producers and/or importers of cellulosic biofuel produced in other countries may also generate RINs and participate in the RFS2 program. While the RFS2 program does provide a financial incentive for companies to import cellulosic biofuels into the United States, the combination of local demand, financial incentives from other governments,

and transportation costs for the cellulosic biofuel has resulted in no cellulosic biofuel being imported to the United States thus far. EPA believes this situation is likely to continue in the near future. Additionally, the majority of internationally based cellulosic biofuel facilities that currently exist or plan to complete construction by the end of 2012 are small research and development or pilot facilities not designed for the commercial production of fuel.

Two notable exceptions, both located in Canada, are Enerkem and Iogen. Enerkem has a currently existing commercial production facility in Westbury, Quebec and is expecting to complete construction on a second facility in Edmonton, Alberta in late 2011. Iogen has a small demonstration facility in Ottawa and is currently exploring the possibility of building its first commercial facility near Prince Albert, Saskatchewan. The large expected production volumes and relatively small distance this fuel would have to be transported to reach the United States make these facilities the most likely candidates to import cellulosic biofuel into the United States. In conversations with EPA, however, both companies indicated that they had no current intentions of importing fuel from their Canadian production facilities into the United States. On September 1, 2010 the government of Canada finalized regulations requiring all gasoline sold in Canada to have a renewable content of 5% and all diesel fuel and heating oil to have a renewable content of 2%. These regulations will further increase local demand for any cellulosic biofuel produced from these two facilities and decrease the likelihood of any of this fuel being exported to the United States. For these reasons we have not included any cellulosic biofuel production from foreign facilities in our projections of cellulosic biofuel availability in 2012.

4. Projections from the Energy Information Administration

Section 211(o)(3)(A) of the Clean Air Act requires EIA to "...provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States." EIA provided these estimates to us on October 19, 2011.⁸ With regard to cellulosic biofuel, the EIA estimated that the available volume in 2012 would be 6.9 million gallons based on its assessment of the utilization of production capacity. A summary of the commercial scale plants they considered and associated production volumes is shown below in Table II.B.4. In addition to the facilities listed in this table EIA also projects that three pilot-scale facilities, those owned by American Process (Alpena, MI), KL Process Design (Upton, WY) and ZeaChem (Boardman, OR) will produce an additional 0.2 million gallons of cellulosic biofuel and make it available for sale in the US in 2012.

⁸ Letter from Howard K. Gruenspecht, EIA Acting Administrator to Lisa Jackson, EPA Administrator October 19, 2011.

Table II.B.4

Commercial-scale cellulosic biofuel plants expected to generate cellulosic biofuel RINs in 2012						
Year Online	Company	Location	Product	Nameplate Capacity (million gallons)	Projected Utilization (%)	Projected Production (million gallons)
2011/12	Fiberight, LLC	Blairstown, IA	Ethanol	6.4	25%	1.6
2012	INP Bioenergy ^a	Vero Beach, FL	Ethanol	8.0	25%	2.0
2012	KiOR	Columbus, MS	Liquids	12.2	25%	3.1
Total				26.6	25%	6.7

^aEPA refers to INEOS New Planet (INP) Bioenergy as INEOS Bio throughout this rule

EIA's projections of cellulosic biofuel production in 2012 are very similar to EPA's projections discussed above and summarized in Section II.B.6 below. The lists of companies that EIA and EPA expect to generate cellulosic biofuel RINS in 2012 are the same. There are, however, several small differences in the volumes of cellulosic biofuel expected to be produced at some of the production facilities listed. EPA has slightly higher projections of cellulosic biofuel production for Fiberight (2 million gallons vs. 1.59 million gallons), INEOS Bio (3 million gallons vs. 2 million gallons), and American Process Inc. (0.5 million gallons vs. less than 0.2 million gallons). These slight variations are a result of different methodologies used by EIA and EPA to project biofuel production in future years. Both Fiberight and INEOS Bio are commercial scale facilities that plan to begin production in 2012. As a result, EIA has used a standard utilization factor of 25% (used for the first year of production for all commercial scale facilities) along with the nameplate capacity of these facilities to project their production volumes for 2012. EPA believes it is more appropriate to consider the timing of the anticipated start up of these facilities within 2012. Facilities planning to begin production early in the year should not have the same expected utilization factor as those planning to begin production near the end of the year. Both Fiberight and INEOS Bio plan to complete construction and begin the production of fuel in early 2012, and therefore EPA has projected production volumes from these facilities that are equivalent to 2012 utilization rates of slightly higher than 25% in comparison to their full, long-term production potential.

EIA's projected production volume for American Process Inc. assumes a utilization factor of 10%, consistent with the factor that EIA uses for all demonstration scale facilities. While this may be reasonable in many cases as the purpose of most pilot plants is not to produce

fuel for commercial scale, American Process Inc. has communicated to EPA that it plans to produce volumes approaching its facility's nameplate capacity in their first year. While EPA believes this is unlikely due to the challenges of starting up a facility utilizing a technology that has not been proven at commercial scale, we believe a volume corresponding to a utilization rate higher than 10%, but at the low end of American Process Inc's target production range is appropriate. While the production volumes of the other companies listed in EIA and EPA's projected available volume tables are not identical, the differences are small and their impact on the overall volume projection is negligible.

There is also a slight variation in the nameplate capacities for two of the listed facilities, Fiberight and KiOR. This is once again the result of differing methods for determining the nameplate capacities used by EIA and EPA. EIA used publically available information to calculate the nameplate capacities for these two facilities. The Fiberight plant is a converted corn ethanol facility that had a production capacity of 25.5 million gallons per year. Fiberight announced they expected to be able produce cellulosic ethanol at 25% of the original capacity and these numbers formed the basis for EIA's nameplate capacity. Similarly for KiOR EIA's nameplate capacity was based on the number of tons the facility could process per day and the expected yield. EPA's nameplate capacities, conversely, are based on conversations with each of these companies. EPA does not believe these slight differences in nameplate capacities have a significant impact on the cellulosic biofuel volume projections made by EPA and EIA.

While the cellulosic biofuel volume projections for 2012 provided by EIA are not identical to those being finalized in this rule EPA believes that they are similar enough to support

the volumes we are finalizing. Where differences exist they are primarily due to EPA's consideration of facility specific situations rather than use of uniform utilization factors. As discussed above, EPA believes this is appropriate, and that wherever possible these facility specific factors should be taken into account. CAA 211(o)(7)(D) vests the authority for making the projection with EPA, since it provides that the projection is "determined by the Administrator based on the estimate provided [by EIA]." If Congress intended that EPA simply adopt EIA's projection without an independent evaluation, it would not have specified that the projection is "determined by the [EPA] Administrator". Although the statute provides that our determination must be "based on the estimate provided" by EIA, we believe that our consideration of EIA's estimate in deriving our own projection as described above satisfies this statutory requirement.

5. Comments on the Proposed Rule

EPA received comments on our proposed rule recommending various methodologies or suggested volumes for the final rule. Several parties supported our projected volumes and emphasized the importance of maintaining a consistent policy supporting growth in the cellulosic biofuel industry. Other comments we received recommended that the volume we set for cellulosic biofuel be based only on the demonstrated production rates of facilities that have been in production for at least three months. EPA believes this approach is inconsistent with the requirement that the mandated volume of cellulosic biofuel be based on the projected, not demonstrated, volume for any given year. Using the approach recommended by the commenters would effectively project no market growth from the end of 2011 through 2012, and would lead

to no 2012 market demand for additional cellulosic biofuel capacity that comes on line during the course of 2012, hindering industry growth. As a result, the incentives for the cellulosic biofuels industry to grow, which are one of the primary purposes of the RFS program and which are consistent with Executive Order 13563, would be compromised.

Several other commenters claimed that cellulosic biofuel technology was not yet capable of producing the volumes of fuel indicated in our proposal and that the proposed range of cellulosic biofuels was too high. Chevron suggested that EPA finalize the lower end of the proposed range (3.55 million ethanol-equivalent gallons). After reassessing the state of the cellulosic biofuel industry and tracking the progress being made towards the production of cellulosic biofuels at commercial scale facilities, EPA believes the industry is capable of exceeding the lower end of the range of projected volume from our proposed rule. In order to provide the appropriate economic conditions for the cellulosic biofuel industry to grow in accordance with the objectives of the statute, it is important that these fuels, once produced, have a viable market. EPA believes that setting the 2012 standard for cellulosic biofuels at the low end of the proposed range, or some lower volume, could potentially result in a depressed market for cellulosic biofuel and would discourage cellulosic biofuel producers from producing quantities of fuel in 2012 that are actually attainable.

Alternatively, we also received comments requesting that EPA finalize the high end of the proposed volume (15.7 ethanol-equivalent gallons). While this approach would provide a strong incentive for potential cellulosic biofuel producers to maximize their production of fuel, EPA does not believe it would be consistent with the requirement that the volume mandate be

based on the projected production volume. As discussed above, several companies have experienced delays in their construction plans since the proposed rule has been published, and others have lowered their production targets or indicated that they no longer intend to generate RINs for the cellulosic biofuel they produce. While it is possible that one or more of the companies for whom we have included volumes in our 2012 projection may produce a greater volume of fuel than we currently anticipate, EPA does not believe it would be appropriate to rely on such speculation in setting the applicable volume of cellulosic biofuel for 2012. We believe that the 2012 cellulosic biofuel applicable volume of 8.65 million gallons (10.45 million ethanol-equivalent gallons) finalized in this rule is a reasonable projection of the volume of cellulosic biofuel that will be produced and made available for RFS compliance in 2012. While this volume is slightly higher than the volume projected by EIA we believe this is appropriate based on the consideration of company specific factors such as when in the year the companies anticipate the start of fuel production and production targets shared with EPA. The difference in the methodologies used for EIA and EPA's projections is discussed in further detail in Section II.B.4.

The Consumers Energy Alliance, in addition to suggesting that the range of cellulosic biofuel production in our proposed rule was too high, also requested that EPA perform a cost-benefit analysis to determine the implications of our proposed standards. The Clean Air Act clearly states that in the event that the projected volume of cellulosic biofuel production for the following year is less than the applicable volume shown in Table II.A-1, EPA is to reduce the applicable volume of cellulosic biofuel to the projected volume available during that calendar

year. Since the mandated volume for any given year is to be based solely on the projected volume available for that year, a cost-benefit analysis is not necessary.

Two cellulosic biofuel companies, American Process Inc. and ZeaChem, commented on the volume of cellulosic biofuels they expect to produce in 2012 and requested that EPA's projections of available volumes of cellulosic biofuel be adjusted accordingly. After consideration of these comments and additional information provided by these two companies EPA agrees that the adjustments they suggested are appropriate. As a result a volume of 500,000 gallons of cellulosic ethanol from American Process Inc., a volume representing the lower end of their production target for 2012, has been included in our projected available volume. The volume of fuel projected from ZeaChem's facility has been changed to 50,000 gallons of cellulosic ethanol in 2012 to more accurately reflect their current expectations for their facility.

Finally, EPA received several comments from obligated parties requesting that in any year in which actual annual production of cellulosic biofuel falls below the applicable volume used to set the annual standard, that EPA use its waiver authority to waive a volume of cellulosic biofuel equal to the shortfall in February of the following year, prior to the February 28 deadline for submission of compliance demonstration reports by obligated parties. This approach, these commenters argued, would ensure that their obligations match the number of cellulosic biofuel RINs that are available in the market. These comments deal with EPA's general waiver authority under CAA 211(o)(7)(A), and thus are not directly related to the annual standard setting process or the waiver authority that is specific to cellulosic biofuel under 211(o)(7)(D). At this time EPA has received no petitions for a waiver of the 2011 cellulosic biofuel volume

under 211(o)(7)(A) due to inadequate domestic supply, and thus we are not considering at this time whether and how any portion of the 2011 cellulosic biofuel applicable volume should be waived.

6. Summary of Volume Projections

The information EPA has gathered on the potential cellulosic biofuel producers in 2012, described above, allows us to project facility-specific volumes of cellulosic biofuel production for 2012. This information is summarized in Table II.B.6-1 below.

Table II.B.6-1

Cellulosic Biofuel 2012 Projected Available Volume

Company Name	Location	Feedstock	Fuel	Capacity (MGY)	Earliest Production	2012 Projected Available Volume (MG)	Ethanol Equivalent Gallons (MG)
American Process Inc.	Alpena, MI	Waste Wood	Ethanol	0.9	Early 2012	0.5	0.5
Fiberright	Blairstown, IA	MSW	Ethanol	6	Early 2012	2.0	2.0
INEOS Bio ^a	Vero Beach, FL	Ag Residue, MSW	Ethanol	8	May 2012	3.0	3.0
KiOR	Columbus, MS	Pulp Wood	Gasoline, Diesel	10	Mid 2012	3.0	4.8
KL Energy	Upton, WY	Bagasse	Ethanol	1.5	Online	0.1	0.1
ZeaChem	Boardman, OR	Planted Trees	Ethanol	0.25	Early 2012	0.05	0.05
					Total	8.65	10.45

^aThis facility is listed as INP Bioenergy in EIA's projections

While the production volumes in Table II.B.6-1 have some uncertainty, we believe that a total volume of 8.65 million gallons (10.45 million ethanol-equivalent gallons) is reasonably attainable. By basing the 2012 cellulosic biofuel standard on the reasonably attainable volumes rather than proven production volumes, we aim to avoid a scenario in which cellulosic biofuel production exceeds the mandated volume; no mechanism exists for this standard to be raised should cellulosic biofuel production exceed the 2011 standard. Such a scenario would result in weak demand for cellulosic biofuels and RINs. Moreover, the standard that we set determines in large part the volumes of cellulosic biofuel that will be produced. We believe that the intent of Congress in establishing steadily increasing applicable volumes of cellulosic biofuel in the RFS program through EISA was to provide a reliable market for these fuels and in so doing to spur growth in the cellulosic biofuels industry. EPA believes the projected available volume finalized in this rule best reflects these intentions.

Based on our assessment of the potential production capabilities of individual companies as described above, EPA is finalizing the cellulosic biofuel standard for 2012 at 10.45 million ethanol-equivalent gallons of cellulosic biofuel. This number represents the volume of RIN-generating cellulosic biofuel that we believe can be made available for use as transportation fuel, heating oil, or jet fuel in 2012. It incorporates reductions from the annual production capacity of each facility based on when fuel production can begin and assumptions regarding a ramp-up period to full production. We believe that a production volume of 10.45 million ethanol-equivalent gallons is reasonably attainable despite the uncertainties. Moreover, by setting the standard for cellulosic biofuel based on the volumes that are reasonably attainable, we are

providing incentives for producers to overcome uncertainties and greater opportunities for funding based on an established demand.

There are also a variety of factors that could lead to production volumes greater than those listed in Table II.B.6-1 and make up for potential shortfalls elsewhere. For instance:

- For each of the facilities listed, we are projecting that their production will be some volume less than the capacity of their facility. It is possible, however, that these companies could produce a greater volume of fuel than they are currently anticipating or has been projected by EPA.
- It is possible that companies that are currently targeting 2013 for commercial production may produce cellulosic biofuel ahead of schedule and generate RINs in 2012. None of this volume was included in our projection for 2012.
- A high demand for cellulosic biofuels may be sufficient to cause companies to import fuel into the United States, even if they currently have no plans to do so. As described in Section II.B.3 above, there are several foreign producers that are either producing cellulosic biofuel now, or could potentially produce some cellulosic biofuel volume in 2012.

Finally, we note that if the actual volume of cellulosic biofuel RINs that are available in 2012 falls short of the 10.45 million gallon RINs used to derive the 2012 cellulosic biofuel standard, obligated parties have other recourses:

- Purchase cellulosic biofuel waiver credits from the EPA (see further discussion in Section V.A)
- Carry over a deficit from 2012 into 2013 according to §80.1427(b) under certain conditions

C. Advanced Biofuel and Total Renewable Fuel in 2012

Under CAA 211(o)(7)(D)(i), EPA has the discretion to reduce the applicable volumes of advanced biofuel and total renewable fuel in the event that the projected volume of cellulosic biofuel production is determined to be below the applicable volume specified in the statute. As described in Section II.B above, we are indeed projecting the volume of cellulosic biofuel production for 2012 at significantly below the statutory applicable volume of 500 million gallons. Because cellulosic biofuel is used to satisfy the cellulosic biofuel standard, the advanced biofuel standard, and the total renewable fuel standard, any reductions in the applicable volume of cellulosic biofuel will also affect the means through which obligated parties comply with the advanced biofuel standard and the total renewable fuel standard. Therefore, we have considered whether and to what degree to lower the advanced biofuel and total renewable fuel applicable volumes for 2012.

If the required volume of cellulosic biofuel for a given year is less than the volume specified in the statute, it is important to evaluate whether there would be sufficient volume of advanced biofuels to satisfy the applicable volume of advanced biofuel volume set forth in the

statute. Even with a reduced volume of cellulosic biofuel, other advanced biofuels, such as biomass-based diesel, sugarcane ethanol, or other biofuels, may be available in sufficient volumes to make up for the shortfall in cellulosic biofuel.

Several commenters stated their belief that the applicable volume of advanced biofuel should always be lowered concurrently, and to the same degree, that the applicable volume of cellulosic biofuel is lowered from the levels set forth in the statute. Since we are finalizing a cellulosic biofuel applicable volume today that is approximately 490 million gallons below the 500 mill gal applicable volume specified in the statute, this approach would lead to a reduction in the advanced biofuel standard of 490 million gallons as well, from 2,000 mill gallons to 1,510 mill gallons. However, as described in the NPRM, we believe that it would not be consistent with the energy security and greenhouse gas reduction goals of the statute to reduce the applicable volume of advanced biofuel set forth in the statute if there are sufficient volumes of advanced biofuels available, even if those volumes do not include the amount of cellulosic biofuel that Congress may have desired. Our authority to lower the advanced biofuel and/or total renewable fuel applicable volumes is discretionary, and in general we believe that actions to lower these volumes should only be taken if insufficient volumes of qualifying biofuel can be made available, based on such circumstances as insufficient production capacity, insufficient feedstocks, competing markets, constrained infrastructure, or the like. As discussed below, we project that sufficient volumes of advanced biofuel can be made available in 2012 such that the 2.0 bill gallon advanced biofuel requirement need not be reduced.

If we were to maintain the advanced biofuel, biomass-based diesel, and total renewable fuel volume requirements at the levels specified in the statute, while also lowering the cellulosic biofuel standard to 10.45 million ethanol-equivalent gallons, then 1,510 million gallons of the 2.0 billion gallon advanced biofuel mandate would be satisfied automatically through the satisfaction of the cellulosic and biomass based diesel standards. An additional 490 million ethanol-equivalent gallons of additional advanced biofuels would be needed. See Table II.C-1.

Table II.C-1

Projected Fuel Mix in 2012 Assuming No Change in Advanced Biofuel or Total Renewable Fuel
Volume Requirements (mill gallons)

	Ethanol-Equivalent Volume	Physical Volume
Total renewable fuel	15,200	14,535 - 14,698
Conventional renewable fuel ^a	13,200	13,200
Total advanced biofuel	2,000	1,335 - 1,498
Cellulosic biofuel	10.45	8.65
Biomass-based diesel	1,500	1,000
Other advanced biofuel ^b	490	326 - 490 ^c

^a Predominantly corn-starch ethanol

^b Rounded to nearest million gallons for simplicity

^c Physical volume is a range because other advanced biofuel may be ethanol, biodiesel, or some combination of the two

The most likely sources of additional advanced biofuel would be imported sugarcane ethanol and additional biomass-based diesel, though there may also be some volumes of other types of advanced biofuel available as discussed below. To determine if there are likely to be sufficient volumes of these biofuels to meet the need for 490 million gallons of other advanced biofuel, we first examined historical data on ethanol imports and projections from EIA and USDA for 2012. Brazilian imports have made up a sizeable portion of total ethanol imported into the U.S. in the past, and these volumes were predominantly produced from sugarcane. Ethanol imports averaged about 380 million gallons per year over the last five years, and reached an all-time high of 730 million gallons in 2006⁹. However, ethanol imports were significantly lower in 2010 than in previous years, and continue to be low in the first half of 2011. This decline in imports may be related to the cessation of the duty drawback that became effective on October 1, 2008, to changes in world sugar prices, and increases in demand within Brazil.¹⁰ Several commenters cited these lower import volumes in the last two years as evidence that importation of sugarcane ethanol will be low in 2012 as well.

However, we believe that the broader view of historical data on sugarcane ethanol imports supports our view that Brazil has significant export potential under the appropriate economic circumstances. Monthly ethanol imports in June and July of 2011 were significantly higher than during any of the previous 16 months, at 3 and 13 million gallons, respectively.¹¹ Moreover, Brazil continues to be second worldwide in the production of ethanol, producing a

⁹ "Monthly U.S. Imports of Fuel Ethanol," EIA, released 3/30/2011

¹⁰ Lundell, Drake, "Brazilian Ethanol Export Surge to End; U.S. Customs Loophole Closed Oct. 1," Ethanol and Biodiesel News, Issue 45, November 4, 2008.

¹¹ Monthly U.S. Imports of Fuel Ethanol, Energy Information Administration, Release Date 9/29/2011

total of 6.9 bill gallons in 2009.¹² By establishing an increased U.S. demand for 490 million gallons of other advanced biofuel in 2012, we would be enhancing the export market for Brazilian sugarcane ethanol. This could increase the percentage of ethanol produced from sugarcane (as opposed to sugar production), and lead to higher volumes of sugarcane ethanol exported to the U.S. Insofar as there is insufficient availability of domestically produced advanced biofuel to meet the need for 490 mill gallons, the price of advanced biofuel RINs would likely increase, providing the incentive for Brazil to export more sugarcane ethanol into the U.S. California's Low Carbon Fuel Standard also went into effect in 2010, and may result in some refiners importing additional volumes of sugarcane ethanol from Brazil into California in 2012. These same volumes would count towards the federal RFS2 program as well.

Projections from other sources also suggest that a large portion of the 490 million gallons of advanced biofuel needed could be supplied by imported sugarcane ethanol. For instance, in its Annual Energy Outlook 2011, EIA projects ethanol imports of approximately 300 million gallons for 2012¹³. In addition, the university-based Food and Agricultural Policy Research Institute (FAPRI) released its 2011 U.S. and World Agricultural Outlook report in which it projects 2012 ethanol imports of 728 million gallons.¹⁴ This is a substantial increase compared to FAPRI's previous projection of 317 mill gallons as cited in our NPRM. While other sources suggest that total Brazilian exports of sugarcane ethanol decreased in 2011 and may decrease in 2012, the higher RIN prices associated with the advanced biofuel mandate would be expected to

¹² Portal Brasil, Energy Matrix for Ethanol, http://www.brasil.gov.br/sobre/economy/energy-matrix/ethanol/br_model1?set_language=en

¹³ Table 11 of AEO2011, Report Number DOE/EIA-0383(2011).
http://www.eia.doe.gov/forecasts/aeo/tables_ref.cfm

¹⁴ Table "Ethanol Trade", Commodity Outlook/Biofuels, FAPRI-ISU 2011 World Agricultural Outlook.
<http://www.fapri.iastate.edu/outlook/2011/>

create an incentive for a greater proportion of Brazilian exports to be imported into the U.S. For instance, according to the FAPRI report, the increase in imports into the U.S. would be concurrent with reductions in imports into other countries rather than an increase in exports of sugarcane ethanol from Brazil.

We also examined the potential for excess biodiesel to help meet the need for 490 million gallons of advanced biofuel. The applicable volume of biomass based diesel established in the statute for 2012 is 1.0 billion gallons (which corresponds to 1.5 billion ethanol-equivalent gallons). As discussed more fully in Section II.D below, we believe that the biodiesel industry has the potential for producing volumes above 1.0 billion gallons if demand for such volume exists.

There are also other potential sources of advanced biofuels. Based on RIN generation reports collected via the EPA-Moderated Transaction System (EMTS), 32 million ethanol-equivalent gallons of advanced biofuel with a D code of 5 were produced in the first half of 2011¹⁵. Extrapolated to the end of the year, it would be reasonable to expect a total of over 60 million ethanol-equivalent gallons of such advanced biofuel to be produced in 2011. Production Outlook Reports also provided some insight into producers' expectations for 2012. For 2012, producers of advanced biofuel projected that they would produce about 80 million ethanol-equivalent gallons, composed of some combination of ethanol, renewable diesel, and heating oil.

¹⁵ RFS2 EMTS Informational Data, updated on August 18, 2011.
<http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/rfsdata.htm>

Another potential source of advanced biofuels is electricity generated from renewable biomass that is used as a transportation fuel. EIA data indicates that in 2009, the most recent year for which data is available, 36.05 million megawatt-hours of electricity was generated from wood and wood derived fuels, and an additional 18.4 million megawatt-hours was generated from other biomass in the United States¹⁶. This is significantly more than the 6.8 million megawatt-hours of electricity used in the transportation sector in 2009¹⁷, equivalent to about 300 mill ethanol-equivalent gallons. While not all the feedstocks used to generate the electricity included in these totals would meet the RFS2's renewable biomass definition, this remains a very large potential source of advanced biofuel RINs.

Currently, there are no valid pathways in Table 1 to §80.1426 for the generation of RINs representing electricity used as transportation fuel. However, several companies have approached EPA with requests for such a pathway, and investigations are underway. It is possible that one or more new pathways for electricity may be available for use in 2012.

In addition to verifying that the feedstocks used to generate renewable electricity meet the renewable biomass definition, producers would also be required to document that the electricity they produce is used as a transportation fuel in order to be eligible to generate RINs. Until recently there were very few vehicles capable of using electricity as a transportation fuel, limited mainly to electric trains and trolley cars. Expected increases in the number of vehicles with this capability, such as electric vehicles and plug in hybrids, has the potential to

¹⁶ Table ES1 of Electric Power Industry 2009: Year in Review. Available online: <http://www.eia.doe.gov/cneaf/electricity/epa/epayir.pdf>

¹⁷ Table 36 of AEO2011, Report Number DOE/EIA-0383(2011). Number based on the conversion that 1 megawatt hour is equivalent to 3.41 million BTU
http://www.eia.doe.gov/forecasts/aeo/tables_ref.cfm

dramatically increase the degree to which electricity is able to be used as a transportation fuel. Verifying that the renewable electricity produced is used as a transportation fuel would still remain a challenge, however the potential for capitalizing on the RIN value, without the necessity of making major changes in the areas of fuel production, distribution, or end use, may be a large enough incentive to overcome this challenge. While the uncertainties associated with the generation of advanced biofuel RINs representing renewable electricity used as transportation fuel prevent EPA from making a quantitative projection for 2012, such RINs may nevertheless play a role in meeting the advanced biofuel standard.

In light of the potential volumes of imported sugarcane ethanol, excess biodiesel, and other sources of advanced biofuel, we continue to believe that there will likely be sufficient volumes of advanced biofuels to meet the need for 490 million ethanol-equivalent gallons. As a result, the applicable volume of advanced biofuel set forth in the statute need not be lowered. A number of commenters on the NPRM agreed with this assessment. However, several commenters raised a concern about the ethanol blendwall, saying that the volume of ethanol that can be legally and practically consumed in 2012 is a limiting factor in how much advanced biofuel can be consumed. We disagree. Based on gasoline energy demand projections from EIA¹⁸, a total of about 14.3 billion gallons of ethanol could be consumed in 2012 if all gasoline contained 10% ethanol.¹⁹ Under the requirements of the RFS program, however, the total volume of ethanol that would need to be consumed to meet the RFS standards would be no more

¹⁸ Total energy demand for light-duty vehicles, motorcycles, and nonroad per AEO 2011 Tables 10, 45, and 46.

¹⁹ In reality, there may be some areas where gasoline without ethanol endures, but there will also be some E85 and potentially other gasoline-ethanol blends as well. We have used a scenario consisting of 100% E10 for this exercise.

than 13.7 billion gallons in 2012²⁰. This assumes an extreme case in which all renewable fuel that is not advanced biofuel is assumed to be ethanol, and all advanced biofuel other than biomass-based diesel is also assumed to be ethanol.

It is possible that more ethanol may be produced/imported in 2012 than is necessary to meet the RFS requirements, and such circumstances could accelerate the arrival of the blendwall. However, this would only occur if market forces favored the consumption of higher volumes of ethanol, and we cannot make reliable predictions of such market forces. Since the applicable standards are set before a given compliance year begins, obligated parties should be coordinating with producers, distributors, and blenders of the various forms of ethanol (e.g. cellulosic ethanol, corn-ethanol, sugarcane ethanol) to ensure that all RFS standards are met by the end of the compliance period.

Based on our assessment of the availability of volumes of advanced biofuel beyond those required to meet the cellulosic biofuel and biomass-based diesel standards, we do not believe that the advanced biofuel standard need be lowered below the 2.0 billion gallon level specified in the Act. Thus, we are not reducing the applicable volume of advanced biofuel for 2012.

A number of parties that commented on the NPRM requested that the applicable volume for total renewable fuel in 2012 be reduced. However, all such commenters tied the reduction in total renewable fuel to a reduction in the advanced biofuel standard. Since we are not lowering the advanced biofuel standard for 2012, and there are expected to be sufficient volumes of corn-

²⁰ From Table II.C-1, sum of ethanol-equivalent gallons of conventional renewable fuel, cellulosic biofuel, and other advanced biofuel.

ethanol to meet the need for 13.2 bill gallons of conventional renewable fuel (see Table II.C-1), we do not believe that there is a need to lower the total renewable fuel standard.

D. Biomass-Based Diesel in 2012

Unlike for cellulosic biofuel, the statute does not require EPA to project available volumes of biomass-based diesel for years up through 2012 and to base the standard on the projected available volume. Instead, the standard for 2012 is to be based on the statutory applicable volume of 1.0 bill gallons. However, the statute does include waiver provisions that allow for lowering the applicable volume of biomass-based diesel under certain circumstances. Moreover, as described more fully in Section II.C above, we must determine whether the required volumes of advanced biofuel and/or total renewable fuel should be reduced if we reduce the required volume of cellulosic biofuel. Since biomass-based diesel is also an advanced biofuel, the amount of biomass-based diesel that is consumed in 2012 directly affects our consideration of adjustments to the volumetric requirements for advanced biofuel and total renewable fuel. We therefore investigated whether the applicable volume of 1.0 bill gallons for biomass-based diesel is achievable in 2012, and whether additional volumes are also feasible.

We examined recent production rates, production capacity of the industry, and projections for future production from a variety of sources. Although there are several different fuel types that can qualify as biomass-based diesel, biodiesel is by far the predominant type.

Thus, our assessment focused primarily on biodiesel, though we also investigated potential volumes of renewable diesel.

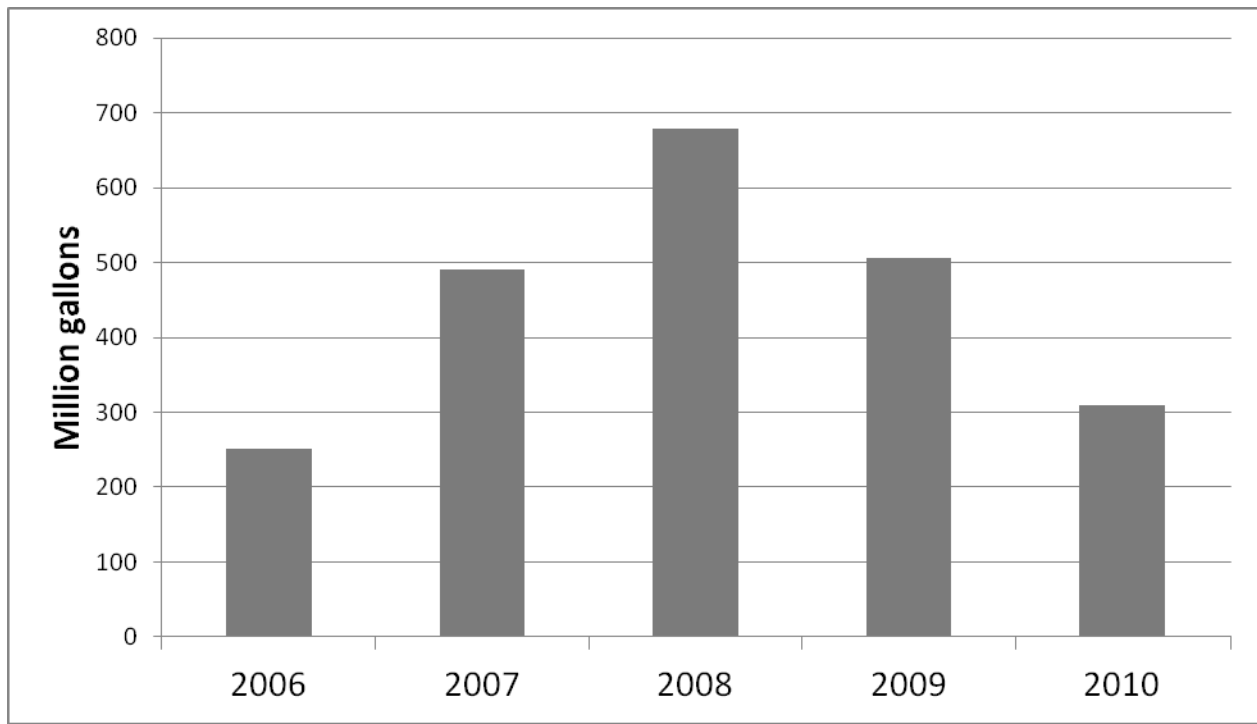
According to information from the EPA-Moderated Transaction System (EMTS) and RIN generation reports submitted to EPA from producers, we estimate that the volume of biomass-based diesel produced in 2010 was about 380 mill gallons.²¹ A number of commenters pointed to this low volume as an indication that the volume requirements of 800 mill gallons in 2011 and 1.0 bill gallons in 2012 are not achievable. However, many of the activities of the biodiesel industry in 2010 were due to unique circumstances that may not apply in 2012. It is likely that a contributing factor to the lower production volumes in 2010 was the expiration of the biodiesel tax credit at the end of 2009 and its absence throughout 2010, and the fact that the RFS program effectively created a demand for about 345 mill gallons in 2010.²² A more comprehensive view of historical biodiesel production levels strongly indicates that the U.S. biodiesel industry has produced higher volumes when demand for it existed, and that as a result the industry has the capability to produce greater volumes than it did in 2010 under the appropriate circumstances. This point is illustrated in Figure II.D-1 below.

²¹ Consists of approximately 209 mill gallons as recorded through EMTS for volume produced under the RFS2 regulations in July through December, and approximately 171 mill gallons as recorded through RIN generation reports submitted by producers for volume produced under the RFS1 regulations in January through June.

²² See question 6.7 in EPA's "Questions and Answers on Changes to the Renewable Fuel Standard Program (RFS2)", <http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/rfs2-aq.htm#6>

Figure II.D-1

Historical Domestic Production of Biodiesel



Source: EIA Monthly Energy Review, Oct 2011, Table 10.4

The biodiesel industry's production potential supports the view that it can more than satisfy the applicable volume of biomass based diesel specified in the statute for 2012. As of August, 2011, the aggregate production capacity of biodiesel plants in the U.S. was estimated at 2.4 billion gallons per year across 148 facilities.²³ We expect the time and reinvestment required to ramp up production at existing facilities to be less than the time required to build and begin production at new plants, which takes about a year on average.²⁴ Thus, restarting idled plants will not be a hindrance to meeting the applicable volumes for biomass-based diesel in 2011 or 2012. A higher mandate for biomass-based diesel will increase demand for biodiesel with associated increases in RIN prices. This in turn will create the incentive for biodiesel producers to put idled capacity into production.

Additionally, information from the U.S. Census Bureau indicates that monthly production volumes of biodiesel have increased steadily in the first half of 2011, reaching about 78 mill gallons by July²⁵. See Figure II.D-2.

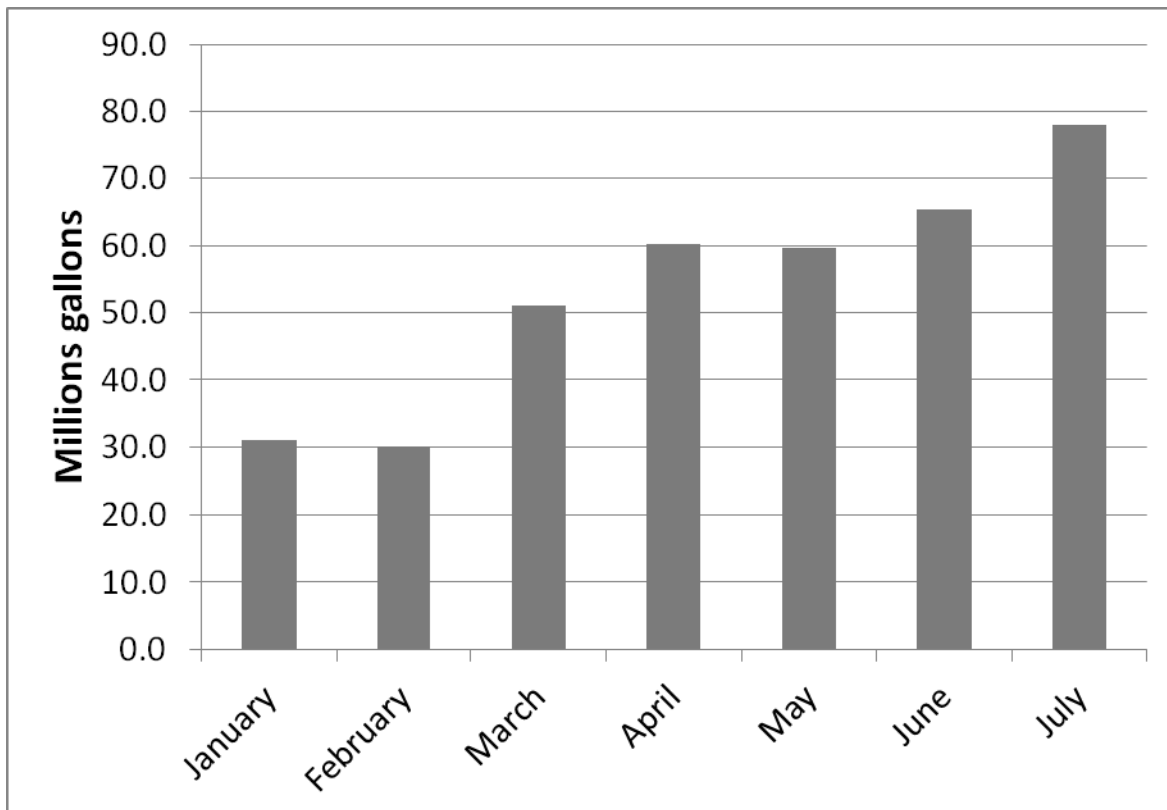
²³ Figures taken from National Biodiesel Board's Member Plant List as of August 22, 2011. Some plants did not report production capacity. <http://biodiesel.org/buyingbiodiesel/plants/showall.aspx>

²⁴ Based on construction times for new plants listed in Biodiesel Magazine from July 2006 through May 2009.

²⁵ U.S. Census Bureau, Fats and Oils, Production, Consumption, and Stocks, Survey M311K. http://www.census.gov/manufacturing/cir/historical_data/m311k/index.html. Assumes 7.68 lb/gal conversion.

Figure II.D-2

2011 Domestic Production of Biodiesel



Over the seven months shown in this figure, biodiesel production increased by an average of about 16% each month. This trend demonstrates that the industry is responding to the higher demand created by the 800 mill gal biomass-based diesel volume requirement under the RFS program in 2011. Biodiesel production will only need to increase at a more modest rate of about 3% each month after July in order for the total 2011 production volume to reach 800 mill gallons. Moreover, further increases in monthly production volumes would not be necessary after December 2011 for the industry to reach a total production volume of 1.0 bill gallons in 2012. We believe, therefore, that the 1.0 bill gallon requirement for biomass-based diesel in 2012 can be met. Moreover, given the increases in monthly production volumes that occurred in the first half of 2011 and the significant amount of underutilized production capacity that exists within the biodiesel industry, there is also reason to believe that monthly production volumes will increase after July 2011 at a rate that is more than needed to meet the statutory biomass-based diesel volume requirements, providing additional volumes that can be used to meet the advanced biofuel standard.

Projections from other sources provide additional support to our conclusions that 1.0 bill gal biomass-based diesel can be produced in 2012. For instance, the U.S. Department of Agriculture projects that over 400 mill gallons of biodiesel will be produced from soybean oil in 2012, and adds that "Although some other first-use vegetable oils are also used to produce biodiesel, most of the remaining biodiesel production needed to reach the 1-billion-gallon mandate of the 2007 Energy Act uses animal fats or recycled vegetable oil as the feedstock."²⁶

This projection is further supported by the Agricultural Marketing Resource Center at Iowa State

²⁶ USDA Agricultural Projections to 2020, Long-Term Projections Report OCE-2011-1, February 2011. See Table 24. Assumes 7.68 lb/gal.

University, which projects that soy-oil biodiesel production may reach as high as 470 mill gallons and that non-soy biodiesel may reach as high as 460 mill gallons.²⁷ Both of these sources project more growth in non-soy oil feedstock volumes than soy oil. Finally, EIA projects that the total volume of biodiesel in 2012 would be about 830 mill gallons.²⁸ While all of these projections suggest that volumes of biodiesel may fall short of 1.0 bill gallons, they do not take into account the increase in monthly production volumes as noted above, nor sources of renewable diesel that will also be available. For instance, Dynamic Fuels has constructed one plant in Geismar, Louisiana that started production of renewable diesel in November, 2010.²⁹ In the final RFS2 rule, we projected that annual renewable diesel production could reach 150 mill gallons based on feedstock availability. Renewable diesel can also be produced at existing refineries with little modification to processing equipment.³⁰ Thus, we currently believe that the total production volume of biomass-based diesel can readily reach 1.0 bill gal in 2012.

We also reviewed information submitted by registered producers of biomass-based diesel under the requirements of §80.1449 for Production Outlook Reports. Of the 65 facilities that submitted a report, the total projected 2012 volume of biomass-based diesel was 937 mill gallons. We believe that this projection is indicative of the industry's expectation that the applicable volume requirement for 2012 will be 1.0 bill gallons and its intention to meet that requirement. Moreover, the projection provided in these reports likely underestimates the actual

²⁷ Soybean Oil and Biodiesel Usage Projections and Balance Sheet, updated 2/18/2011. A version made available on 8/1/2011 shows similar volumes of soybean oil for biodiesel use, but does not provide information about non-soy oil sources of biodiesel. <http://www.extension.iastate.edu/agdm/crops/outlook/soybeanbalancesheet.pdf>. Values cited are for the "High" case.

²⁸ Short-Term Energy Outlook, August 2011. Table 8.

²⁹ Project status updates are available via the Syntroleum website, <http://dynamicfuelsllc.com/wp-news/>

³⁰ For such a product to qualify for biomass-based diesel, however, it cannot be co-processed with petroleum feedstock. This might limit its potential for refinery-based production of qualifying product.

expectations and capabilities of the industry, since the number of facilities that submitted a report is far less than the total number of facilities capable of producing biodiesel and renewable diesel.

In addition to production capacity and projections of 2012 production volume, we also investigated feedstocks used to produce biomass-based diesel. We believe that there will be sufficient sources of qualifying renewable biomass to more than meet the needs of the biodiesel industry in 2012. The largest sources of feedstock for biodiesel in 2012 are expected to be soy oil, canola oil, rendered fats, and corn oil extracted during production of fuel ethanol. In response to the NPRM, the National Biodiesel Board (NBB) cited historically high soybean production rates for 2011 as evidence that there will be ample volumes of soybean oil available for biodiesel production. Likewise, the Renewable Energy Group (REG) provided information on significant increases in the availability of inedible corn oil from ethanol producers that it believes will occur in the next 1-2 years.

While commenters did not provide any information suggesting that the applicable volume of 1.0 billion gallons cannot be reached, some raised concerns about impacts on other industries and feedstock price. For instance, the American Trucking Association (ATA) stated that feedstocks will need to be diverted from other uses in order to meet the 1.0 billion gallon requirement, and the American Cleaning Institute (ACI) provided information about how such a diversion could affect the oleochemical industry. We address concerns about price in more detail below in our discussion of ATA's request for a waiver of the 2012 applicable volume of 1.0 billion gallons.

While we agree that the total volume of animal fats is largely inelastic and is unlikely to grow significantly due to the presence of the increasing market for biomass-based diesel, we also agree with the statement from ACI that "there is nothing in EISA or the proposed rule that limits the amount of animal fats that can be used to meet the mandate." Under the statutory definition of renewable biomass, valid feedstocks include animal waste material and animal byproducts. We believe that animal fats fall into these categories, and as a result we do not have the authority to exclude or limit volumes of animal fats that are used for production of biomass-based diesel. Such wastes could potentially be considered "biogenic waste oils/fats/greases" or "non-cellulosic portions of separated food waste" under the RIN-generating pathways listed in Table 1 to §80.1426, and could thus be eligible for the production of RIN-generating biofuel.

In response to the NPRM, we received comments both in support of and opposed to our proposal to maintain the statute's applicable volume of 1.0 bill gallons for biomass-based diesel in 2012. In general, producers of biodiesel and crop-based feedstocks were supportive, citing the sufficiency of available feedstocks and production capacity. Several supporters indicated that historically low biodiesel production volumes are not an appropriate reference point on which to base the capabilities of the industry for the future, since the higher biomass-based diesel mandates established by Congress for 2011 and 2012 are expected to drive production volumes more than any other factor.

Parties opposed to maintaining the statutory applicable volume of 1.0 bill gallons for 2012 were primarily obligated parties, as well as representatives of diesel trucking companies and the oleochemical industry. To a large degree, these commenters pointed to historical

biodiesel production levels in support of their belief that 1.0 bill gallons in 2012 is not achievable. As described above, we do not agree with this conclusion.

One party opposed to maintaining the 1.0 bill gal requirement for 2012 also raised concerns about infrastructure. We acknowledge that the required expansion of the biodiesel handling capacity at terminals will represent a challenge to industry. However, as discussed in the NPRM, we continue to believe that there will be sufficient biomass-based diesel distribution infrastructure in place to support the use of 1.0 bill gal biodiesel in 2012. For instance, NBB stated in their comments that in most markets, terminals can treat 5% biodiesel blends as a fungible commodity like diesel fuel and that they believe that many terminals may be storing B5 blends. To the extent terminals store a finished B5 blend, it would obviate the need for much of the segregated biodiesel storage and blending capability that is assumed in our infrastructure analysis. The Iowa Biodiesel Board stated that claims that industry cannot accommodate the distribution of the target gallons are baseless and cited various examples of recent biodiesel blending initiatives at Iowa terminals.

Industry activities are currently progressing to ramp up biodiesel consumption from the approximately 380 mill gallons estimated to be used in the U.S. in 2010 to the volumes that will be needed in 2011 to meet the biomass-based diesel volume requirement. For example, Kinder Morgan and the Renewable Energy Group opened a substantial biodiesel distribution facility to serve the Chicago area in December of 2010.³¹ Magellan also recently announced that it plans to

³¹ Biodiesel Magazine, November 17, 2010. <http://www.biodieselmagazine.com/articles/4568/chicago-area-terminal-soon-to-offer-biodiesel>

complete its biodiesel blending facility in Sioux Falls Minnesota in 2011.³² In June of this year, Sunoco Logistics and Sprague Energy opened a new terminal facility to supply biodiesel blended transportation fuel and heating fuel to New Jersey.³³ These new terminal facilities employ segregated biodiesel storage and blending capability. Just as there has been considerable biodiesel production capacity idled due to lack of demand which will be brought back on line as biodiesel volumes ramp up, we believe that there may also be substantial idled biodiesel distribution assets that could be brought back into service. It seems reasonable to assume that at least some of the distribution assets used previously to deliver biodiesel manufactured at now idled production plants would still be available.

Of the parties that requested a reduction in the applicable volume of 1.0 bill gallons for 2012, the American Trucking Association (ATA) and Chevron explicitly invoked the waiver mechanism provided at 211(o)(7)(E). The full text of this statutory provision is shown below:

(E) BIOMASS-BASED DIESEL.—

(i) MARKET EVALUATION.—The Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall periodically evaluate the impact of the biomass-based diesel requirements established under this paragraph on the price of diesel fuel.

³² Report to the Legislature, Annual Report on Biodiesel, Minnesota Department of Agriculture, January 15, 2011. <http://www.mda.state.mn.us/en/news/government/~media/Files/news/govrelations/leg rpt-biodiesel2011.ashx>

³³ http://www.tankterminals.com/news_detail.php?id=1284

(ii) WAIVER.—If the Administrator determines that there is a significant renewable feedstock disruption or other market circumstances that would make the price of biomass-based diesel fuel increase significantly, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall issue an order to reduce, for up to a 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed 15 percent of the applicable annual requirement for biomass-based diesel. For any calendar year in which the Administrator makes a reduction under this subparagraph, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(iii) EXTENSIONS.—If the Administrator determines that the feedstock disruption or circumstances described in clause (ii) is continuing beyond the 60-day period prescribed in clause (ii) or this clause, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, may issue an order to reduce, for up to an additional 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed an additional 15 percent of the applicable annual requirement for biomass-based diesel.

The waiver authority provided in paragraph 211(o)(7)(E)(ii) is based on an EPA determination that there “is” a feedstock disruption or other market circumstance that would

make the price of biomass-based diesel rise significantly. The authority to extend a temporary waiver in paragraph (iii) is based on an EPA determination that such disruption or circumstance “is continuing.” Thus, we believe that any waiver of the 2012 biomass-based diesel requirements under this statutory provision must be based on an evaluation of feedstock conditions or other circumstances that exist currently and “would make” the price of biomass based diesel rise significantly in 2012. If Congress had intended that we project future market circumstances that might lead to significant price increases, it could have used “will be” in place of “is” in paragraph 211(o)(7)(E)(ii). Thus, we believe that any waiver of the biomass-based diesel requirements for 2012 must be based on a current evaluation of the market, rather than a projected one.

We do not believe that the information provided by Chevron and ATA warrants a waiver of the 2012 biomass-based diesel volume at this time. While ATA provided some information on the relative price of biodiesel and conventional diesel, it did not demonstrate how this price difference represented a price increase as required under the statute. Also, they did not cite any particular renewable feedstock disruption or other market circumstance to demonstrate how the difference in price between conventional diesel fuel and biomass-based diesel meets the statutory criterion for a significant increase in the price of biomass-based diesel.

Both Chevron and ATA cite an expected expiration of the biodiesel tax credit at the end of 2011 as a reason that prices will increase significantly. EPA has not determined whether the expiration of a tax credit should be considered a “market circumstance” within the meaning of CAA 211(o)(7)(E)(ii), and is making no determination regarding that matter at this time.

Whether or not such a development would be a “market circumstance,” it is clear that it is not an existing circumstance, and conjecture that the tax credit may not be continued in the future does not provide an appropriate basis for a waiver under 211(o)(7)(E)(ii). Apart from possible consideration under the statutory waiver provisions, however, we note that the applicable volumes set by Congress must be met regardless of the status of federal or state tax credits, subsidies, incentives, and the like.

One commenter requested a cost-benefit analysis in the context of determining the appropriate volume for biomass-based diesel in 2012. Under the statute, we are to set the percentage standard for biomass-based diesel for 2012 based on the applicable volume of 1.0 billion gallons specifically set forth in the statute in CAA 211(o)(2)(B)(IV). While the statute does provide limited mechanisms for waiving all or a portion of any annual biomass-based diesel standard in 2012 under CAA 211(o)(7), the statute does not require a cost-benefit analysis either in setting a standard based on the statutory applicable volume or in considering whether or not to issue a waiver. For instance, under 211(o)(7)(A), waivers can be granted based on an EPA finding of severe harm to the economy or environment of a state, region, or the United States, or inadequate domestic supply. Under 211(o)(7)(E) waivers can be granted based on a significant renewable feedstock disruption or other market circumstance that would make the price of biomass-based diesel fuel increase significantly. Neither of these statutory provisions provides for a comparison of the costs associated with meeting the biomass-based diesel standard to the benefits of meeting that standard. Therefore, we do not believe that cost-benefit analyses are necessary or appropriate in the context of considering the 2012 biomass-based diesel volume of 1.0 billion gallons.

Based on our review of the production potential of the biodiesel industry, projections from several sources, and our assessment of available feedstocks, we believe that the 1.0 billion gallons needed to satisfy the applicable volume of biomass-based diesel specified in the statute can be produced in 2012, and that more than 1.0 billion gallons of production is possible. Moreover, we do not believe that waiving a portion of the 2012 biomass-based diesel volume of 1.0 billion gallons under the provisions of 211(o)(7)(E) is appropriate at this time.

III. Final Percentage Standards for 2012

A. Background

The renewable fuel standards are expressed as a volume percentage, and are used by each refiner, blender or importer to determine their renewable volume obligations (RVO). Since there are four separate standards under the RFS2 program, there are likewise four separate RVOs applicable to each obligated party. Each standard applies to the sum of all gasoline and diesel produced or imported for use in the U.S. The applicable percentage standards are set so that if each regulated party meets the percentages, then the amount of renewable fuel, cellulosic biofuel, biomass-based diesel, and advanced biofuel used will meet the volumes required on a nationwide basis.

As discussed in Section II.B.6, we are finalizing a required volume of cellulosic biofuel for 2012 of 8.65 million gallons (10.45 million ethanol equivalent gallons). The advanced biofuel and total renewable fuel volumes will not be reduced below the applicable volumes specified in the statute. The final 2012 volumes used to determine the four percentage standards are shown in Table III.A-1.

Table III.A-1

Final Volumes for 2012

	Actual Volume	Ethanol Equivalent Volume
Cellulosic biofuel	8.65 mill gal	10.45 mill gal
Biomass-based diesel	1.0 bill gal	1.5 bill gal
Advanced biofuel	2.0 bill gal	2.0 bill gal
Renewable fuel	15.2 bill gal	15.2 bill gal

The formulas used in deriving the annual renewable fuel standards are based in part on estimates of the volumes of gasoline and diesel fuel, for both highway and nonroad uses, that will be used in the year in which the standards will apply. Producers of other transportation fuels, such as natural gas, propane, and electricity from fossil fuels, are not subject to the standards, and volumes of such fuels are not used in calculating the annual standards. Since the standards apply to producers and importers of gasoline and diesel, these are the transportation fuels used to set the standards, and then again to determine the annual volume obligations of an individual gasoline or diesel producer or importer.

B. Calculation of Standards

1. How Are the Standards Calculated?

The following formulas are used to calculate the four percentage standards applicable to producers and importers of gasoline and diesel (see §80.1405):

$$\text{Std}_{\text{CB},i} = 100\% \times \frac{\text{RFV}_{\text{CB},i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$\text{Std}_{\text{BBD},i} = 100\% \times \frac{\text{RFV}_{\text{BBD},i} \times 1.5}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$\text{Std}_{\text{AB},i} = 100\% \times \frac{\text{RFV}_{\text{AB},i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$\text{Std}_{\text{RF},i} = 100\% \times \frac{\text{RFV}_{\text{RF},i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

Where

$\text{Std}_{\text{CB},i}$ = The cellulosic biofuel standard for year i , in percent.

$\text{Std}_{\text{BBD},i}$ = The biomass-based diesel standard (ethanol-equivalent basis) for year i , in percent.

$\text{Std}_{\text{AB},i}$ = The advanced biofuel standard for year i , in percent.

$\text{Std}_{\text{RF},i}$ = The renewable fuel standard for year i , in percent.

$\text{RFV}_{\text{CB},i}$ = Annual volume of cellulosic biofuel required by section 211(o) of the Clean Air Act for year i , in gallons.

$\text{RFV}_{\text{BBD},i}$ = Annual volume of biomass-based diesel required by section 211(o) of the Clean Air Act for year i , in gallons.

$\text{RFV}_{\text{AB},i}$ = Annual volume of advanced biofuel required by section 211(o) of the Clean Air Act for year i , in gallons.

$\text{RFV}_{\text{RF},i}$ = Annual volume of renewable fuel required by section 211(o) of the Clean Air Act for year i , in gallons.

$G_i =$ Amount of gasoline projected to be used in the 48 contiguous states and Hawaii, in year i , in gallons.

$D_i =$ Amount of diesel projected to be used in the 48 contiguous states and Hawaii, in year i , in gallons.

$RG_i =$ Amount of renewable fuel blended into gasoline that is projected to be consumed in the 48 contiguous states and Hawaii, in year i , in gallons.

$RD_i =$ Amount of renewable fuel blended into diesel that is projected to be consumed in the 48 contiguous states and Hawaii, in year i , in gallons.

$GS_i =$ Amount of gasoline projected to be used in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.

$RGS_i =$ Amount of renewable fuel blended into gasoline that is projected to be consumed in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.

$DS_i =$ Amount of diesel projected to be used in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.

$RDS_i =$ Amount of renewable fuel blended into diesel that is projected to be consumed in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.

$GE_i =$ The amount of gasoline projected to be produced by exempt small refineries and small refiners in year i , in gallons, in any year they are exempt per §§80.1441 and 80.1442, respectively.

$DE_i =$ The amount of diesel projected to be produced by exempt small refineries and small refiners in year i , in gallons, in any year they are exempt per §§80.1441 and 80.1442, respectively.

The four separate renewable fuel standards for 2012 are based in part on the gasoline and diesel consumption volumes projected by EIA. The Act requires EPA to base the standards on an EIA estimate of the amount of gasoline and diesel that will be sold or introduced into commerce for that year. EIA estimates 8.85 million barrels per day of gasoline (~136 billion gallons) and 3.36 million barrels per day of transportation diesel (~ 52 billion gallons) will be sold or introduced into commerce in 2012.³⁴ Because diesel used in ocean-going vessels is excluded from the RFS2 program, that amount must be subtracted from the total projected transportation diesel value. EIA estimates approximately 26,000 barrels per day of transportation diesel will be used in ocean-going vessels in 2012, resulting in approximately 3.334 million barrels per day (51.11 billion gallons) projected for all other transportation uses in 2012.

³⁴ Letter, Howard K. Gruenspecht, Acting Administrator, U.S. Energy Information Administration, to Lisa P. Jackson, Administrator, U.S. Environmental Protection Agency, October 19, 2011.

The gasoline and diesel volumes are adjusted to account for renewable fuel volumes – ethanol (estimated by EIA) and biodiesel (based on EIA’s Short-Term Energy Outlook (STEO)). For 2012, these values are 0.87 million barrels per day (~13 billion gallons) and 0.119 quadrillion Btu³⁵ (~ 0.9 billion gallons), respectively.

In addition, because Alaska does not participate in the RFS2 program, the gasoline and diesel volumes must be further reduced by Alaska’s projected share of transportation fuels. To determine the 49-state values for gasoline and diesel, the amounts of these fuels used in Alaska is subtracted from the totals provided by DOE. Just as with its corresponding gasoline and diesel volumes, renewable fuels used in Alaska are not included in the renewable fuel volumes that are subtracted from the total gasoline and diesel volume estimates. Section 211(o) of the Clean Air Act requires that the renewable fuel be consumed in the contiguous 48 states, and any other state or territory that opts-in to the program (as Hawaii has done). However, because renewable fuel produced in Alaska is unlikely to be transported to the contiguous 48 states or to Hawaii, including Alaska’s renewable fuel volumes in the calculation of the standard would not serve the purpose intended by section 211(o) of the Clean Air Act of ensuring that the statutorily required renewable fuel volumes are consumed in the 48 contiguous states and any state or territory that opts-in

The 2012 Alaska fractions of U.S. consumption are determined from the most recent (2009) EIA State Energy Data System (SEDS) estimates, assuming fairly constant Alaska to U.S. year-to-year ratios. We used Table CT1 “Energy Consumption Estimates for Major Energy

³⁵ Table 8 “U.S. Renewable Energy Supply and Consumption”, Short Term Energy Outlook, U.S. Energy Information Administration, October 2011.

Sources in Physical Units, 1960-2009, Alaska” to get total gasoline and ethanol consumption for Alaska for 2009. We coupled this data with total U.S. estimates from Table C2 “Energy Consumption Estimates for Major Energy Sources in Physical Units, 2009” to determine the corresponding Alaska fractions. The gasoline fraction is approximately 0.2%. Ethanol use in Alaska is estimated at 8.4% of its gasoline consumption (based on the data in Table CT1), or approximately 0.2% of national ethanol consumption. Because only transportation diesel fuel is subject to the RFS program, we need more specific data than that used to calculate the gasoline and ethanol fractions. We used data from Table C8 “Transportation Sector Energy Consumption Estimates, 2009” to calculate the Alaska transportation distillate fuel oil fraction, 0.8%. Biodiesel use is assumed to be zero. The Alaska and U.S. data just described are shown in Table III.B-1.

Table III.B-1. Alaska and U.S. Data

	Alaska	U.S.	Alaska fraction ^x
Motor Gasoline	6725 Mbbl ^a	3283.7 MMbbl ^b	0.2%
Fuel Ethanol	565 Mbbl ^a	262.8 MMbbl ^b	0.2%
Transportation Distillate	46.1 tBtu ^c	5528.3 tBtu ^c	0.8%

^aSource: EIA State Energy Data System, Table CT1 “Energy Consumption Estimates for Major Energy Sources in Physical Units, 1960-2009, Alaska”.

^bSource: EIA State Energy Data System, Table C2 “Energy Consumption Estimates for Major Energy Sources in Physical Units, 2009”

^cSource: EIA State Energy Data System, Table C8 “Transportation Sector Energy Consumption Estimates, 2009”

^xCalculated value

2. Small Refineries and Small Refiners

In CAA section 211(o)(9), enacted as part of the Energy Policy Act of 2005, Congress provided a temporary exemption to small refineries (those refineries with a crude throughput of no more than 75,000 barrels of crude per day) through December 31, 2010. In RFS1, we exercised our discretion under section 211(o)(3)(B) and extended this temporary exemption to the few remaining small refiners that met the Small Business Administration's (SBA) definition of a small business (1,500 employees or less company-wide) but did not meet the statutory small refinery definition as noted above. Because EISA did not alter the small refinery exemption in any way, the RFS2 program regulations exempted gasoline and diesel produced by small refineries and small refiners in 2010 from the renewable fuels standard (unless the exemption was waived), see 40 CFR §80.1141.

Under the RFS program, Congress provided two ways that small refineries can receive a temporary extension of the exemption beyond 2010. One is based on the results of a study conducted by the Department of Energy (DOE) to determine if small refineries would face a disproportionate economic hardship under the RFS program. The other is based on EPA determination of disproportionate economic hardship on a case-by-case basis in response to refiner petitions.

In January 2009, DOE issued a study which did not find that small refineries would face a disproportionate economic hardship under the RFS program.³⁶ The conclusions were based in part on the expected robust availability of RINs and EPA's ability to grant relief on a case-by-case basis. As a result, beginning in 2011 small refiners and small refineries were required to participate in the RFS program as obligated parties, and there was no small refiner/refinery volume adjustment to the 2011 standard as there was for the 2010 standard.

Following the release of DOE's 2009 small refinery study, Congress directed DOE to complete a reassessment and issue a revised report. DOE recently re-evaluated the impacts of the RFS program on small entities and concluded that 21 small refineries would suffer a disproportionate hardship if required to participate in the program³⁷. As a result, these refineries will be exempt from being obligated parties for a minimum of two additional years, 2011 and 2012.³⁸ In 2009, the gasoline produced by refineries identified in the DOE report as well as those refineries exempted through the petition process constituted approximately 3.6% of total US gasoline, and 4.5% of total US diesel. Applying these percentages to the 2012 projections of gasoline and diesel volumes yields exempt small refinery gasoline volume of 4.87 billion gallons and diesel volume of 2.28 billion gallons.

CAA section 211(o) requires that the small refinery adjustment also account for renewable fuels used during the prior year by small refineries that are exempt and do not

³⁶DOE report "EPACT 2005 Section 1501 Small Refineries Exemption Study", (January, 2009).

³⁷ "Small Refinery Exemption Study: An Investigation into Disproportionate Economic Hardship," U.S. Department of Energy, March 2011.

³⁸ Since the standards are applied on an annual basis, the exemptions are likewise on an annual basis even though the determination of which refineries would receive an extension to their exemption did not occur until after January 1, 2011.

participate in the RFS2 program. Accounting for this volume of renewable fuel would reduce the total volume of renewable fuel use required of others, and thus directionally would reduce the percentage standard. However, as we discussed in RFS1, the amount of renewable fuel that would qualify, i.e., that was used by exempt small refineries but not used as part of the RFS program, is expected to be very small. In fact, these volumes would not significantly change the resulting percentage standards. Whatever renewable fuels small refineries blend will be reflected as RINs available in the market; thus there is no need for a separate accounting of their renewable fuel use in the equations used to determine the standards. Thus we assign a value of zero to small refinery renewable fuel use.

The 2012 standards reflect the exemption of these refineries. In addition, and separate from the DOE determination, EPA may extend the exemption for individual small refineries on a case-by-case basis if they demonstrate disproportionate economic hardship.

In the NPRM, we stated that “requests for exemptions that are approved after the release of the final 2012 RFS standards will not affect the 2012 standards.” This position is unchanged from that set in the final rule establishing the 2011 standards³⁹. At that time, we stated, “EPA believes the Act is best interpreted to require issuance of a single annual standard in November that is applicable in the following calendar year, thereby providing advance notice and certainty to obligated parties regarding their regulatory requirements. Periodic revisions to the standards to reflect waivers issued to small refineries or refiners would be inconsistent with the statutory text, and would introduce an undesirable level of uncertainty for obligated parties.” However, a few commenters took issue with this approach. Specifically, these commenters maintain that

³⁹ See 75 FR 76805, December 9, 2010.

EPA did not provide notice and comment opportunities regarding the extensions of the small refinery exemptions for the current compliance period (2011), and that EPA cannot grant such extensions (mid-year) without modifying the standards because such authority is not provided in the statute. In addition, these commenters extend the application of their comments to any extensions of exemptions that may occur after issuance of the final 2012 standards.

Commenters suggested requiring petitions to be submitted in time to be considered in the annual standard-setting process. One commenter also suggested that the volumes waived in 2011 as a result of the small refiner waivers be “made up” in setting the 2012 standards. EPA understands the desire of the commenters to have the annual required volumes of renewable fuels realized.

However, while the statute requires EPA to publish the standards for the following year by November 30 of the preceding year, there is no provision for changing the percentage standards once they are set outside of the waiver provisions of CAA 211(o)(7). In addition, we are not required to ensure that the biofuel volumes in the statute are precisely met. We are required to use the specified volumes to set the percentage standards, but there are no provisions for ensuring that the percentage standards actually result in the specified volumes actually being consumed. This outcome is evidenced by the fact that we use projections of gasoline and diesel volume for the next year which might turn out to be too high or too low. Insofar as those projections are wrong, the percentage standards will not produce a demand for biofuels that exactly corresponds to the volumes in the statute. Thus Congress allowed for some imprecision to exist in the actual volumes of renewable fuel that are consumed as a result of the percentage standards that we set each November, and did not provide a means for correcting the percentage standards after November to ensure that the applicable volumes of renewable fuel are exactly met in a given compliance year.

3. Final Percentage Standards

As finalized in the March 26, 2010 RFS2 rule, the standards are expressed in terms of energy-equivalent gallons of renewable fuel, with the cellulosic biofuel, advanced biofuel, and total renewable fuel standards based on ethanol equivalence and the biomass-based diesel standard based on biodiesel equivalence. However, all RIN generation is based on ethanol-equivalence. More specifically, the RFS2 regulations provide that production or import of a gallon of biodiesel will lead to the generation of 1.5 RINs. In order to ensure that demand for 1.0 billion physical gallons of biomass-based diesel will be created in 2012, the calculation of the biomass-based diesel standard provides that the required volume be multiplied by 1.5. The net result is a biomass-based diesel gallon being worth 1.0 gallons toward the biomass-based diesel standard, but worth 1.5 gallons toward the other standards.⁴⁰

The levels of the percentage standards would be reduced if Alaska or a U.S. territory chooses to participate in the RFS2 program, as gasoline and diesel produced in or imported into that state or territory would then be subject to the standard. Neither Alaska nor any U.S. territory has chosen to participate in the RFS2 program at this time, and thus the value of the related terms in the calculation of the standards is zero.

Note that the terms for projected volumes of gasoline and diesel use include gasoline and diesel that has been blended with renewable fuel. Because the gasoline and diesel volumes

⁴⁰ 75 FR 14716, March 26, 2010.

estimated by EIA include renewable fuel use, we must subtract the total renewable fuel volume from the total gasoline and diesel volume to get total non-renewable gasoline and diesel volumes, as discussed earlier. The values of the variables described above are shown in Table III.B.3-2. Terms not included in this table have a value of zero.

Table III.B.3-2

Values for Terms in Calculation of the Standards (bill gal)

Term	Value
$RFV_{CB,2012}$	0.01045
$RFV_{BBD,2012}$	1.0
$RFV_{AB,2012}$	2.0
$RFV_{RF,2012}$	15.20
G_{2012}	135.39
D_{2012}	50.68
GE_{2012}	4.87
DE_{2012}	2.28
RG_{2012}	13.31
RD_{2012}	0.93

Using the volumes shown in Table III.B.3-2, we have calculated the percentage standards for 2012 as shown in Table III.B.3-3.

Table III.B.3-3

Final Percentage Standards for 2012

Cellulosic biofuel	0.006%
Biomass-based diesel	0.91%
Advanced biofuel	1.21%
Renewable fuel	9.23%

IV. Changes to RFS2 Regulations

As the RFS2 program got underway in the second half of 2010, we discovered that a number of regulatory provisions were causing confusion among regulated parties. In some cases the confusion was due to a lack of specificity in terms, while in others it was due to unique circumstances that were not sufficiently addressed in the RFS2 regulations. A few amendments are being finalized in order to correct these problems and to amend regulatory language that inadvertently misrepresented our intent as reflected in the preamble to the final RFS2 regulations. In addition, as we have worked with regulated parties to ensure that the RFS program is operating as intended, we identified areas in the regulations that could benefit from streamlining. We also identified one provision in the gasoline benzene regulations that misrepresented our intent as stated in the preamble. As a result, we are finalizing a number of amendments to the RFS regulations, and one amendment to the gasoline benzene regulations, in 40 CFR Part 80.

A. Summary of Amendments

Below is a table listing the provisions that we are amending in today's action. We have provided additional explanation for several of these amendments in Sections IV.B through IV.F below.

Table IV.A-1

Summary of Technical Amendments

Section	Description
80.1275(d)(3)	Removed to allow for the inclusion of transferred blendstocks in the calculation of benzene early credits.
80.1401	Amended definition of "annual cover crop" to clarify that the crop has no existing market to which it can be sold except for its use as feedstock for the production of renewable fuel.
80.1401	Amended definition of "naphtha" to clarify that it applies to hydrocarbons only, must be commonly or commercially known as naphtha, and is used for producing gasoline.
80.1405(a), (b), and (d)	Amended to state the standards for 2012 and the date of the annual standards calculation.
80.1405(c)	Amended terms "GE _i " and "DE _i " to reference the amount of gasoline and/or diesel produced by small refineries and small refiners that are exempt pursuant to §§80.1441 and 80.1442.
80.1415(c)(2)	Amended to state the specific requirements needed for technical justifications for applications for Equivalence Values.
80.1426(f)(1)	Corrected typographical error in cross reference to paragraph (f)(6) of §80.1426.
80.1426(f)(5)(ii)	Amended requirements so that the separated yard waste plans and separated food waste plans need not be approved by EPA, but instead only need to be accepted by EPA under the registration provisions.

80.1429(b)(2)	Amended to clarify that "fossil-based" diesel fuel is different from renewable diesel fuel.
80.1429(b)(9)	Amended to include RIN separation limitations on parties whose non-export RVOs are solely related to imports of gasoline and diesel or the use of blendstocks to produce gasoline or diesel.
80.1449(a)	Amended Production Outlook Report due date; added allowance for unregistered renewable fuel producers and importers to submit Production Outlook Reports.
80.1450(d)(1)-(d)(3)	Amended to add more specificity on when updates, addenda, or resubmittals are required for engineering reviews and to include references to foreign ethanol producers.
80.1451(a)(1)(xi)	Amended to clarify that this section references RFS1 RINs retired for compliance.
80.1452(b)(2)	Corrected typographical error.
80.1452(b)(4)	Amended to clarify that a RIN-generating importer must submit to EMTS the EPA facility registration number of the facility at which the renewable fuel producer or foreign ethanol producer produced the batch.
§80.1452(b)(5)	Amended to clarify that for imports of renewable fuel, the RIN-generator must submit to EMTS the EPA facility registration number of the importer that imported the batch.
80.1460(b)(6)	Adds the existing prohibition against generating a RIN for fuel for which RINs have previously been generated.

80.1464(a)(2)(iii), (a)(2)(iv), (b)(2)(iii), (b)(2)(iv), (c)(1)(iii), and (c)(1)(iv)	Added to clarify that auditors must verify that product transfer documents for RIN transactions contain the required information for obligated parties/exporters and for renewable fuel producers/importers.
80.1464(a)(2)(i), (a)(3)(ii), (b)(2)(i), (b)(3)(ii)	Amended to clarify that auditors must validate RIN separations for obligated parties/exporters and for renewable fuel producers/importers; amended to correct typographical error.
80.1465(h)(2); 80.1466(h)(2); and 80.1467(e)(1), (e)(2), and (g)(2)	Amended to remove the option of using an alternative commitment in lieu of paying a bond and to clarify the amount of bond a foreign entity must post.

There are also two changes to Table 1 to §80.1426 that we proposed in the July 1, 2011 NPRM that we are not finalizing in today's action, but which instead will be finalized in a separate action. The first change would amend the table to include ID letters for each pathway to facilitate references to specific pathways. The second change would add "rapeseed" to the existing pathway that currently allows canola oil to be used as a valid feedstock in the production of biodiesel. These two changes are being finalized in a separate action in order to ensure that multiple changes to Table 1 to §80.1426 that are made sequentially do not inadvertently result in later changes over-writing earlier changes.

B. Technical Justification for Equivalence Value Application

A producer or importer of renewable fuels is required to submit an equivalence value (EV) application in accordance with §80.1415(c) for any renewable fuel that does not have an EV listed in §80.1415(b). In addition, a producer or importer could apply for an alternative EV if the producer or importer has reason to believe that a different EV than that listed in §80.1415(b) is warranted. Section 80.1415(c) provides the calculation equation for the EV of the renewable fuel and the requirements for the technical justification to be submitted in the EV application.

We have received many inquiries from producers and importers of renewable fuels requesting clarification of the specific requirements for the technical justification listed in §80.1415(c). In addition, based on the many EV applications we have evaluated, we have found that we needed to request additional information from producers and importers to better understand the composition of the renewable fuel they produced, such as intermediate steps and energy inputs in production process, sources of renewable and non-renewable feedstock, and so forth, to better evaluate and assign the correct EV to the producer or importer's renewable fuel.

Therefore, we are finalizing in this rulemaking amendments to §80.1415(c)(2) to clarify the current requirements and to include additional requirements for the technical justification to be submitted in the EV application. The final amendments to §80.1415(c)(2) include:

- A calculation for the requested equivalence value according to the equation in §80.1415(c)(1), including supporting documentation for the energy content (EC) of the renewable fuel such as a certificate of analysis from a laboratory that verifies the lower heating value in Btu per gallon of the renewable fuel produced.
- For each feedstock, component or additive used to make the renewable fuel, provide a description, the percent input and identify whether or not it is renewable biomass or is derived from renewable biomass.
- For each feedstock that could independently qualify as a renewable fuel, state whether or not RINs have been previously generated for the feedstock.
- A description of renewable fuel and the production process, including a block diagram that shows quantities of all inputs and outputs required at each step of the production process for the production of one batch of renewable fuel.

We received no adverse comments on our proposed changes to §80.1415(c)(2), and so are finalizing the changes as proposed.

C. Changes to Definitions of Terms

1. Definition of Annual Cover Crop

As explained in the preamble of the RFS2 final rulemaking, EPA extended modeling for cellulosic biofuel made from corn stover and biodiesel/renewable diesel made from waste

oils/fats/greases to certain fuels made from annual cover crops, based on the expectation that cultivation of annual cover crops, as defined in §80.1401, will have little impact on the agricultural commodity markets and therefore little or no land use impact associated with them. Therefore, certain fuels (as specified in Table 1 to §80.1426) derived from annual cover crop feedstocks qualify for D-codes under the advanced biofuel, biomass-based diesel, and cellulosic renewable fuel categories.

Section 80.1401 of the final RFS2 rule defines “annual cover crop.” We proposed to amend the definition of annual cover crop in order to more clearly define those feedstocks that meet the intent of including cover crops in several pathways in Table 1 to §80.1426.

As explained in the proposal, in order to extend our modeling to cover crops, we used the rationale that annual cover crops would have no indirect land use impact since they are planted on land otherwise used for crop production. Direct greenhouse gas emissions would only be associated with growing, harvesting and transporting the cover crop, and then processing into biofuel. (See 75 FR 14794 col. 3.) These direct impacts could include requiring the farmer to use more commercial fertilizer in compensation for removing cover crops that would have been plowed into the field, or in decreasing yield of food crops. However, our determination that cover crops qualified for D-codes under the advanced biofuel, biomass-based diesel, and cellulosic renewable fuel categories was based on the fact that they did not have any indirect impacts. Thus, we assumed that no additional land would be required to plant annual cover crops, that cover crops would not displace primary crop production, and that the use of the cover crop as a feedstock for renewable fuels would not have secondary impacts on other agricultural

commodity markets. This implies that annual cover crops would not be planted and harvested for the purpose of being sold to existing markets. If a cover crop already had an existing market, then the increased use of cover crops as feedstocks for renewable fuel production could potentially impact the existing markets. Therefore, we proposed to amend the current definition for “annual cover crop” to clarify that for purposes of the RFS program the term only includes crops that have no existing market to which they can be sold except for the use of the feedstock for renewable fuel. This will ensure that no unintended land use or significant indirect effects result from the use of annual cover crops as feedstocks for renewable fuel production.

Several parties commented against this change, stating that it is too restrictive and thus would prevent some crops they considered cover crops from qualifying as eligible feedstock under the RFS2 program. While this change clarifies that crops having existing market impacts would not qualify as cover crops, such exclusion is consistent with the basis for including the cover crop provision. EPA determined that crops with no market value could be planted on land without any expected impact on other crops and thus no expected indirect land use impact. This amendment clarifies that only crops with no market impact can qualify as cover crops and is consistent with the underlying analysis. However, even if a crop does not qualify under this revised cover crop definition, that does not prevent it from being included as an eligible feedstock under the RFS2 program. As stated in the proposal, EPA recognizes that there may be additional fuel pathways requiring lifecycle greenhouse gas (GHG) assessments and the assignment of appropriate RIN D-Codes, including those using feedstocks that do not meet the proposed amended definition of annual cover crop. For further guidance on the process for requesting EPA evaluation of new fuel pathways, please refer to the following sites:

<http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/rfs2-lca-pathways.htm>

<http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/lca-petition-instructions.htm#1>

2. Definition of "Naphtha"

In the RFS2 final rule, we included several RIN-generating pathways in Table 1 to §80.1426 for naphtha made from renewable biomass. We also provided a definition of naphtha in §80.1401. However, the definition we finalized was overly broad and did not adequately represent our intent to limit naphtha to gasoline blendstocks. As a result, some biofuel producers have expressed interest in interpreting the term "naphtha" to include materials that, while falling within the boiling range of gasoline, are not used as a blendstock to produce gasoline.

To remedy this situation, we proposed to revise the definition of naphtha to also specify that it applies only to blendstocks which are composed of only hydrocarbons, are commonly or commercially known as naphtha, and are used to produce gasoline. We received no adverse comments on this proposal, and so are finalizing it as proposed.

D. Technical Amendments Related to RIN Generation and Separation

1. RIN Separation Limit for Obligated Parties

We proposed to amend section §80.1429(b)(9) to limit the amount of RINs a company who is an obligated party solely by virtue of importation of obligated fuel can separate to meet their Renewable Volume Obligation (RVO). This proposal was designed to prevent abuse of the obligated party RIN separation provision by a company that imports a relatively small amount of an obligated volume, but then separates a large amount of RINs. It was also designed to help prevent hoarding of RINs by parties that do not need them for compliance purposes, and to generally increase the liquidity of RINs. EPA structured the original RFS1 separation regulations around facilitating compliance by obligated parties who must acquire RINs to meet their RVOs. This change is consistent with the original design and also ensures that importers can separate enough RINs to meet their obligations. Overall, commenters were against this amendment with many companies indicating that they are currently taking advantage of the ability to separate all RINs in their possession if they are an obligated party solely related to their gasoline and/or diesel imports, and that they wish to continue to do so.

One commenter opposed this change, stating that the RIN life limitation would prevent hoarding. EPA does not agree with this; the life of a RIN prevents use for compliance after a designated amount of time, see §80.1447(a)(6), this does not provide an adequate mechanism to prevent hoarding of RINs.

Several commenters stated that the carryover provisions prevent RIN hoarding. EPA does not agree; the carryover provisions, §80.1428(a)(5), refer only to the ratio of assigned RINs

to volumes of renewable fuel owned at the end of a quarter. There is no limit on the amount of separated RINs that a party may own at the end of a quarter.

Several commenters stated that market liquidity would decrease if obligated importers could not separate all RINs that they own. They also stated that RINs will be held by fewer obligated parties. We believe that market liquidity would not be decreased; RIN separation would still occur according to §80.1429 and obligated parties would still have access to the separated RINs needed for compliance. In fact, to the extent that the provision prevents RIN hoarding, as intended, it should increase RIN liquidity. EPA has determined that this will not change or limit who can participate in the RFS program or become an obligated party; it will only limit the number of RINs that certain importers can separate. In addition, these obligated importers and any other RIN owning party can separate RINs without being subject to the limitation in §80.1429(b)(9) for any of the reasons outlined in §80.1429(b)(2)-(b)(5) and (b)(8).

One commenter was concerned about how an obligated importer would know how many RINs they could separate for “receipt of fuel by an obligated party” noting that they will not know their exact RVO until the end of the compliance year. EPA believes that obligated importers should separate RINs on the basis of “receipt of fuel by an obligated party” only to the extent necessary to meet their existing obligation.

One commenter felt that the proposed amendment would limit the actual capacity of an importer to introduce a volume of renewable fuel into the marketplace. EPA does not agree with this statement and believes that limiting RIN separation using the reason “receipt of fuel by an

obligated party” would not reduce the amount of renewable fuel that is in demand and may be sold.

One commenter requested confirmation of the following statement: “this change would, in no way, limit the right of a company to separate RINs from renewable fuel if that entity is acting as a blender and blending renewable fuel into transportation, heating fuel or jet fuel.” EPA confirms the previous statement with one clarification. Amended §80.1429 applies “except as provided in paragraphs (b)(2) through (b)(5) and (b)(8).” Since the obligation for blenders to separate RINs for renewable fuel that they blend to produce a transportation fuel, heating oil or jet fuel appears in (b)(2), the limitations in (b)(9) are not applicable to RIN separations pursuant to that provision. We clarify, however, that (b)(2) applies to blending “to produce” a transportation fuel, heating oil or jet fuel. For example, blending biodiesel at a rate of 5% into motor vehicle diesel fuel would produce a transportation fuel.

One commenter indicated that this method of separation helped companies that did not want to be involved with the RFS program; allowing obligated importers to transfer renewable fuel without RINs and not violating the quarterly check outlined in §80.1428(a)(5). EPA notes that all parties have the ability to separate up to 2.5 RINs per gallon pursuant to §80.1429. This amendment, which will limit obligated importers’ ability to separate RINs, would not change this feature. This provision could facilitate the transfer of fuel with separated RINs to parties not wishing to receive RINs. Also, small blenders have the ability to delegate all RIN related responsibilities to the party directly upstream as long as they are blending less than 125,000 gallons of renewable fuel per year (§80.1440). In addition to separating up to their RVO,

obligated importers and any other RIN owning party can separate for any of the reasons outlined in §80.1429(b)(2)-(b)(5) and (b)(8) without being subject to the limitation in (b)(9).

One commenter argued that the ability to separate as an obligated importer allowed them more flexibility with RIN transfer dates. EPA believes that this implies that the party uses its ability to separate to avoid the requirement in §80.1428(a)(3) “an assigned RIN cannot be transferred to another person without simultaneously transferring a volume of renewable fuel to that same person.” The commenter indicated that a reason for becoming an obligated importer is to be able to separate all RINs and avoid the previously referenced regulatory requirement. This also allows them to remain in compliance with the EMTS transaction reporting time frames laid out on §80.1452(c). EPA believes that transfer date and the ability to transfer separated RINs without renewable fuel are not relevant to this amendment. The commenter’s use of the provision is counter to how the program was set up to ensure the distribution of RINs and could be used not only to slow the transfer of RINs downstream to the blender or final user of the renewable fuel, but also allow hoarding. The commenter also stated that there is no requirement to report physical fuel inventory and number of assigned RINs (§80.1428(a)(5)). EPA has determined that this statement is not accurate pursuant to §80.1451. Currently, §80.1451(c)(2)(xiv), requires the volume of renewable fuel owned at the end of the quarter. This volume must meet the requirements of §80.1428(a)(5).

EPA believes that while commenters were mainly against the amendment, specific arguments presented supported EPA’s reason for the amendment. For the reasons stated above, we are finalizing the regulatory changes as proposed.

2. RIN Retirement Provision for Error Correction

As we stated in the proposal, in some instances, renewable fuel producers or importers may improperly generate RINs in EMTS as a result of calculation errors, meter malfunctions or clerical errors. Pursuant to §80.1431(a), improperly generated RINs are invalid, and cannot be used to achieve compliance with any Renewable Volume Obligations (RVOs).

EPA sought comment on the possibility of amending §80.1431 to provide the regulated community with limited flexibility to allow certain RINs that were improperly generated to nevertheless be transferred and used for compliance, provided the RIN-generator retires equivalent RINs (the same quantity and fuel category (D-code) of RINs with the same RIN year) in order to make the market whole.

We sought comment on whether EPA should amend the regulations to include the flexibility for EPA to allow improperly generated RINs to be used for compliance, whether the conditions set forth in the proposal were appropriate, and whether there are additional or alternative conditions that should be imposed if the flexibility were to be granted. We proposed that the following general limitations should apply to any flexibility to allow improperly generated RINs to be transferred and used for compliance: 1) the RINs must have been improperly generated as a result of an inadvertent error, 2) the improperly generated RINs must have the correct D code, 3) the RIN generator must correct the information submitted to EMTS

and retire an equivalent number and type of any excess RINs that were generated as a result of the error within a fixed time period of 60 days, 4) the flexibility to allow improperly generated RINs to be used for compliance would only apply if the number of excess RINs generated for a particular batch exceeds the number of RINs that should have been generated by no more than two percent, and 5) the flexibility to allow improperly generated RINs to be used for compliance should be limited to a certain number of times per year per RIN generator.

We received several comments in support of providing EPA with some sort of flexibility to allow improperly generated RINs to be used for compliance, and a few comments that did not support EPA providing any flexibility of this type. Supporters of the flexibility believe that this flexibility is necessary for good faith RIN generators who have made inadvertent mistakes. They argue that the flexibility will avoid time spent by both EPA and regulated parties tracking invalidly generated RINs to their current owner when equivalent RINs could be retired to make the system whole. Commenters believe EPA's time is better spent investigating more egregious violations. Many supporters of the flexibility, however, believe that, given the proposed limitations, the proposed flexibility would be too narrow. Commenters believe that EPA should take into consideration the totality of the circumstances, including the number of RINs/percent of the batch that are invalid, the frequency of improper generation on the part of the producer and indications of good faith mistake when determining whether to allow the flexibility for improperly generated RINs to be used for compliance, rather than imposing strict limitations on the use of the flexibility.

EPA believes that providing this type of flexibility will reduce disruptions to the RIN market while continuing to apply appropriate pressure on parties that generate, transfer and use RINs to comply with the regulations. However, EPA disagrees with the commenters that advocated that the flexibility should be unlimited. EPA believes that by limiting the use of this flexibility, RIN generators are provided an incentive to implement and utilize measures and controls to ensure the validity of information sent to EMTS in a more timely manner. Therefore, in today's rule in 80.1431(c) and (d), EPA is finalizing an approach that provides flexibility to RIN generators to retire equivalent RINs in situations where they have over-generated RINs on a

batch due a broken meter, an inadvertent temperature correction error, or an inadvertent administrative error. This flexibility may only be used under certain conditions, though, in order to mitigate harm to the RIN market, as specified in the regulations and discussed in detail below.

Some commenters supported the proposed 60-day time allowance for a RIN generator to correct RIN generation information submitted to EMTS. The commenters believe 60 days is sufficient to identify and correct inadvertent mistakes, and the time limit provides an incentive for the regulated community to regularly verify that RINs have been correctly generated. On the other hand, another commenter thought that the correction period should be longer than 60 days. One commenter suggested 18 months for RIN generators to notify EPA of improperly generated RINs at which point EPA would determine whether to allow those invalid RINs to be used for compliance. The commenter believed this would allow invalid RINs to be discovered during the attest audit conducted each year concerning the renewable fuel producer's compliance records.

Additionally, commenters generally disagreed with EPA's proposal to limit the flexibility to situations where the number of excess RINs generated for a particular batch exceeds the number of RINs that should have been generated by no more than 2%. Commenters argued that a simple typing error in any digit can easily result in an over-generation that far exceeds 2%. One commenter suggested that the number of RINs eligible for the flexibility be limited to no more than 2% of a specific RVO category (e.g. Cellulosic Biofuel, Advanced Biofuel, etc.) for any given year. Another suggested that there is no reason to limit the flexibility this way, and that EPA should maintain discretion to determine when invalid RINs can be used for compliance, regardless of what percentage of the RIN batch is invalid. The commenter states

that there is no reasonable equitable basis for limiting the availability of the flexibility to situations involving an error of no more than 2%, since there can be significant variability in the size of renewable fuel batches; for example, 2% of a large batch could consist of more RINs than an entire batch for a smaller facility.

In today's final rule, EPA did not limit the ability to use the flexibility to a certain number of RINs or percentage of a batch as proposed because we agree with commenters' suggestion that a simple typing or meter error may result in a large number of excess RINs just as easily as it could result in an error that constitutes only a small number of RINs. EPA's decision to eliminate the two percent limitation may result in more regulated parties taking advantage of the flexibility created by this rule. Nevertheless, EPA is limiting the use of the flexibility to situations in which RIN generators who improperly over-generated RINs on a batch fit certain criteria, including taking remedial action to retire equivalent RINs within 30 days of the original invalid RIN generation submission in EMTS, as specified in 80.1431(c)(7). EPA believes that it is appropriate to require RIN generators to correct the information submitted to EMTS within 30 days to encourage the regulated community to take prompt corrective action, which will aid in maintaining market integrity. EPA believes that limiting the amount of time that RIN generators are afforded to avail themselves of this flexibility is necessary to provide an incentive to RIN generators to conduct timely internal inspections of their RIN generation activities in order to ensure that RINs are properly generated and the accuracy of RIN information in EMTS.

We also sought comment on the possibility of establishing a limit on the number of times this flexibility could be requested within a compliance period by a given RIN generator. We stated that we believe such a limitation could encourage RIN generators to take appropriate measures to avoid generating invalid RINs, and limit the possibility that RIN generators would intentionally generate invalid RINs to take advantage of short term RIN price spikes. Some commenters argued that there should not be a limit on the number of times a RIN generator can request EPA allow them to use the flexibility, but that if a particular company regularly generates RINs improperly, that company should be penalized on a case-by-case basis, taking into account whether the error was truly a mistake made in good faith.

EPA disagrees with commenters' belief that RIN generators should have unlimited access to these flexibilities. EPA believes that the flexibility should be limited to a set number (namely, five) of improperly generated batches per year and is finalizing regulations to that effect in 80.1431(c)(6). By limiting the number of times a RIN generator may utilize the flexibility to retire equivalent RINs, the regulations will encourage RIN generators to implement robust measures and controls to prevent errors from occurring, knowing that the flexibility is only available to them for five batches each compliance year. Additionally, limiting the number of batches to which this flexibility can be applied restricts the ability of RIN generators that might otherwise intentionally generate invalid RINs to take advantage of short term RIN price spikes.

Finally, EPA is finalizing a provision informing the regulated community that EPA intends to publicly post information concerning RIN generators utilizing this flexibility in 80.1431(c)(7)(B). By posting this information, EPA is assisting obligated and other regulated

parties in their due diligence to ensure compliance with all RFS2 regulations. EPA believes that posting information concerning the use of this flexibility will incentivize proper RIN generation in the future.

Further, EPA may remove improperly generated RINs from EMTS if the RIN generator has failed to properly meet the remedial action requirements stated in the regulations, as specified in 80.1431(d). EPA believes this will prevent invalid RINs that do not meet the requirements in 80.1431(c) from propagating through the market and being used for compliance purposes, thus preventing additional violations. While EPA is aware that the proposal did not include the ability to remove improperly generated RINs, EPA believes this ability is a logical outgrowth from the comments that EPA should spend more time investigating egregious violations. This provision will allow EPA to quickly remove from the market those RINs reported by the RIN generator to be invalid due to reasons in 80.1431(c)(2), thus affording EPA more time to spend investigating egregious violations.

Finally, a number of commenters noted that good faith purchasers and the ultimate users of the RINs, the obligated parties, should not be subject to a violation for unwittingly buying and/or retiring invalid RINs for compliance. EPA disagrees, and believes that the “buyer beware” aspect of the RIN trading program is one of the cornerstones of the program. It provides an important incentive for the regulated community to comply with the regulations and mandates due diligence on the part of all RIN buyers. It encourages self-policing on the part of RIN generators, owners and users in order to keep the program functioning smoothly. EPA is not making any changes to the liability sections of RFS2 as a result of these comments and although

today's rule will allow obligated parties to use some invalid RINs for compliance, the obligated parties and any intermediary party are still liable for buying and/or transferring invalid RINs.

3. Production Outlook Reports Submission Deadline

In the final RFS2 regulations, in §80.1449(a), EPA set the annual deadline for submitting Production Outlook Reports as March 31 of each year. However, EPA has determined that, in order for the information contained in the Production Outlook Reports to be most useful when setting the RFS2 volume requirements and associated percentage standards for the following calendar year, the reports should contain the most accurate projections possible. Since the accuracy of projections tends to increase the closer those projections are made to the following calendar year, we proposed that the March 31 deadline should be moved to June 1. This revised deadline would still allow the information contained in the Production Outlook Reports to be used in the development of the final rulemaking setting the standards for the following year.

We received one comment on the proposed Production Outlook Reports deadline of June 1 that suggested August 31, or as late as possible that still ensures the information is useful in the development of the final RFS standards for the following year. EPA believes, however, that if the deadline is set later in the year, there would be insufficient opportunity for EPA to quality check the incoming data prior to incorporating it into the analysis for developing the RFS2 volume requirements and associate percentage standards for the following calendar year. EPA

strives to make the most accurate projections possible, so without time to check the data quality, there could be inaccuracies in the volume requirements that lead to market disruption.

Another commenter suggested that having the Production Outlook Reports deadline immediately after the May 31 attest engagement deadline would place a significant burden on regulated parties at that time, and suggests a deadline of June 30 for the Production Outlook Reports. EPA believes that it is not a significant burden for regulated parties to submit the Production Outlook Report at the same time as the attest engagement report, especially considering the attest audit and report are typically conducted by independent third-party auditors, rather than the regulated parties themselves.

For the reasons stated above, EPA believes that the proposed June 1 deadline for Production Outlook Reports is reasonable and should not be moved to later in the year. Therefore, EPA is finalizing the June 1 deadline for Production Outlook Reports.

4. Attest Procedures

In the final RFS2 regulations, EPA required in §80.1464(c)(1)(i) and (c)(2)(ii) that RIN owners conduct attest procedures for RIN transaction and RIN activity reports that involve RIN separations. This requirement was intended to be included in the attest procedures for obligated parties and exporters as well as for renewable fuel producers and RIN-generating importers, in order to confirm that RINs are being properly separated by all parties participating in the RIN

market. Thus, we proposed amendments to §80.1464(a)(2)(i) and (a)(3)(ii) for obligated parties and exporters as well as to §80.1464(b)(2)(i) and (3)(ii) for renewable fuel producers and RIN-generating importers to include attest procedures concerning verification of RIN separation.

Additionally, in the final RFS2 regulations, EPA required in §80.1464 that auditors of RIN generation reports verify that product transfer documents (PTDs) include the required information. EPA believes it would be beneficial for auditors to verify the required information is present on PTDs for RIN transactions for all parties, including obligated parties, renewable fuel producers and importers and RIN owners. Thus, we proposed amendments to §80.1464(a)(2), (b)(2) and (c)(1) to require auditors to verify that the PTDs for a representative sample of RINs sold and purchased contains the information required in §80.1453.

We received one comment that stated that the attestation procedures should be comparable for all reporting activities of all regulated parties. EPA believes, however, that the proposed regulatory changes to the attest engagement procedures apply consistently to all regulated parties in that all parties are responsible for ensuring that RINs that they separate, purchase or use for compliance have been properly separated and that they have associated PTDs with all of the required information. Another commenter states that obligated parties should not be required to audit RIN separation activities in addition to RIN purchases. Again, EPA feels this additional check on RIN separation activities will ensure that the RINs are properly separated and that renewable fuel is actually being blended for use as transportation fuel, heating oil or jet fuel. Therefore, EPA is finalizing the amendments to the attest engagement procedures as proposed.

E. Technical Amendments Related to Registration & Recordkeeping

1. Construction Discontinuance & Completion Documentation

The registration requirements in §80.1450(b)(1)(vi) state that for facilities claiming the exemption described in §80.1403(c) or (d), evidence must be submitted demonstrating the date that construction commenced. However, the registration requirements do not explicitly require the submission of evidence demonstrating that they meet the other requirements described in §80.1403(c)(1) and (2) or (d)(1), (2) and (3).

In order to verify that facilities which claim to qualify for an exemption under §80.1403(c) or (d) in fact meet all of the qualification requirements for such an exemption, we proposed to amend §80.1450(b)(1)(vi) to include requirements that the owner or operator of facilities claiming exemption under §80.1403(c) submit evidence demonstrating that construction was not discontinued for a period of 18 months after construction began, and that construction was completed by December 19, 2010. Similarly, we proposed that for facilities claiming the exemption under §80.1403(d), evidence be submitted demonstrating that construction was not discontinued for a period of 18 months after construction began and that construction was completed within 36 months of the commenced construction date .

We received comments that EPA should not adopt these proposed amendments because the requirements would be overly burdensome and unnecessary due to the fact that the majority of all facilities that have claimed the exemption under §80.1403 have already been registered and therefore these amended requirements would have no effect on these facility's registration. Secondly, the commenter stated that the proposed requirement to submit evidence that construction was not discontinued for a period of 18 months is unreasonable because it is unclear how a facility could prove a lack of construction activity. Thirdly, the commenter stated that the proposed amendment to submit evidence that construction was timely completed was unnecessary because a facility's operation activity such as production of fuel was enough to serve as evidence that construction was completed. The commenter suggested that EPA only request evidence to demonstrate that these requirements are met from facilities that EPA believes did not rightly claim the exemption under §80.1403.

In order to fully assess the concerns raised by the commenters, EPA has decided to investigate this issue in more detail and analyze some additional options. Therefore, at this time, EPA is not taking final action with respect to this proposed amendment.

2. Third-Party Engineering Reviews

The regulations stipulate that producers of renewable fuels and foreign ethanol producers are required to update their registration information, and submit an updated independent third-

party engineering review, every 3 years after their initial registration in accordance with §80.1450(d)(3). We have received many inquiries regarding the start date that EPA uses to determine the 3 year period after which the producer must submit an updated independent third party engineering review (such as the registration acceptance date, the third-party professional engineer's signature date on the engineering review report, or the due date for engineering reviews.

Given the lack of clarity in the current regulations, we proposed amendments to specify the time frame for submission of updated independent third-party engineering reviews which included a simplified method that would group producers according to the calendar year they were or will be registered, and set a fixed time frame for registration updates for each group. We proposed to amend §80.1450(d)(3) to stipulate that for all producers of renewable fuel and foreign ethanol producers for which registration was accepted by EPA in calendar year 2010, that the updated registration information and independent third-party engineering review would be submitted to EPA within the three months prior to January 1, 2014, and within three months prior to January 1 of every third calendar year thereafter. For all producers of renewable fuel and foreign ethanol producers registered in any calendar year after 2010, the updated registration information and independent third-party engineering review would be submitted to EPA within three months prior to January 1 of every third calendar year after the first year the producer's registration was accepted by EPA. For example, a producer registered in 2011 would be required to submit an updated independent third-party engineering review by January 1, 2015, and by January 1 every three calendar years thereafter.

We received comments that supported the adoption of the proposed amendments for a simplified method of grouping producers according to the calendar year that they were or will be registered to determine the due date for submission of the updated registration information and independent third-party engineering review. The commenter suggested that we provide a clear method to determine the due date for individual facilities to further help with the compliance of this requirement. We agree with the commenter that providing more clarity and guidance would help facilities comply with this requirement. Therefore, in the near future and well before the due date for any updated engineering reviews, we plan to compile and publish a guidance document that will provide the date in which each facility's registration was accepted, the calendar year in which each facility will be grouped, and the corresponding triennial due dates for the updated engineering review for each calendar year group. This guidance document will be published on the RFS public website. Parties must also comply with all other applicable requirements in 40 CFR Part 80, Subpart M. This guidance does not, in any way, alter the requirements of the renewable fuel program regulations, and does not establish or change legal rights or obligations.

In addition, we are removing from the final rule the proposed 3 months allowance period prior to triennial due date. The reason we included a 3 months allowance was to ensure that the updated engineering reviews were not submitted so early as to not provide appropriately updated information as of the three-year submission deadline. We believed at the time of the proposal that the inclusion of the 3 month window would ensure that facilities conduct their engineering review closer to the end of the 3 year period, which we assumed would provide the most up-to-date information. However, now we believe that the inclusion of this 3 month period is unnecessary since the owners or operators of a facility can determine for themselves when it is

appropriate to coordinate and conduct the engineering review for their facility and that the regulatory requirement for “up-dated” engineering reviews provide sufficient clarity that the information submitted to EPA must reflect the up-to-date information

Therefore, we are finalizing in this rulemaking the proposed simplified method to group facilities based on the calendar year in which their facility’s registration was accepted by EPA with the due date for the updated registration and independent third party engineering review to be submitted to EPA by January 31st of every 3 calendar years, starting from the acceptance date of the facility’s initial registration. We are allowing the engineering reviews to be submitted at the end of January due to possible scheduling concerns during the holiday season.

3. Foreign Ethanol Producers

We proposed that the amendments to the registration requirements in §80.1450 also apply to foreign ethanol producers. As defined in §80.1401, foreign ethanol producers are foreign producers that produce ethanol for use in transportation fuel, heating oil or jet fuel but who do not add denaturant to their product. Therefore, foreign ethanol producers do not technically produce “renewable fuel” as defined in our regulations. As discussed in the preamble to the Direct Final Rule published on May 1, 2010 (see 75 FR 26032), the result of the amendments made in the Direct Final Rule is to require foreign ethanol facilities that produce ethanol that ultimately becomes part of a renewable fuel for which RINs are generated to provide EPA the same registration information as foreign renewable fuel facilities that export their product to the

United States. In both cases the required registration information is important for enforcement purposes, including verifying the use of renewable biomass as feedstock and the assignment of appropriate D codes. Therefore, we believe amendments to the registration requirements that we make in this final rule should also be applicable to foreign ethanol producers for the same reasons. We did not receive comments on this proposed change, so we are finalizing the amendment as proposed.

F. Additional Amendments and Clarifications

1. Third-Party Engineering Review Addendum

We have received many inquiries as to whether an addendum to the existing independent third-party engineering review is sufficient to meet the requirement that all producers of renewable fuel and foreign ethanol producers submit an updated independent third-party engineering review if they make changes to their facility that will qualify the renewable fuel that is produced for a renewable fuel category or D code that is not already reflected in the producer's registration information. In some circumstances the majority of the information verified in the existing independent third-party engineering review would remain the same, and duplicating the entire effort does not appear necessary. We believe the concept of allowing the submission of an addendum in lieu of a updated independent third-party engineering review is reasonable and therefore we are finalizing to amend the requirements in §80.1450(d)(1) to state that a producer of renewable fuel or foreign ethanol producer may submit an addendum to the existing independent third-party engineering review on file with EPA provided the addendum meets all

the requirements in §80.1450(b)(2) and verifies for EPA the most up-to-date information at the producer's existing facility. The updated independent third-party engineering review or addendum shall be submitted at least 60 days prior to producing the new type of renewable fuel and must meet all the same requirements stipulated in §80.1450(b)(2) for the independent third-party engineering review, including a new site visit conducted by the third-party to verify any changes to the facility that allows it to produce a different renewable fuel that is not currently reflected in their registration on file with EPA.

2. RIN Generation for Fuel Imported from a Registered Foreign Producer

In RFS2, EPA finalized provisions allowing importers to generate RINs for renewable fuel imported from a foreign producer only under certain circumstances. The importer may only generate RINs for fuel imported from a foreign renewable fuel producer or foreign ethanol producer if that producer is registered with EPA and has received EPA company and facility identification numbers pursuant to §80.1450. Pursuant to §80.1426(c)(4), the importer is prohibited from generating RINs for fuel imported from a foreign producer that is not registered with EPA. In the proposed rulemaking, EPA proposed to clarify that when an importer is generating RINs for fuel imported from a registered foreign renewable fuel producer or foreign ethanol producer, the importer must submit to EPA via EMTS the importer's company identification number, the facility identification number of the import facility where the batch was imported, and the facility identification number for the foreign renewable fuel or ethanol producer that produced the batch of fuel for which the importer is generating RINs. EPA did not

receive comments on these clarifications, and is therefore finalizing them as proposed in §§80.1452(b)(4) and (5).

3. Bond Posting

We proposed to amend paragraphs (e)(1), (e)(2) and (g)(2) of §80.1467 to make them consistent with §80.1467(g)(1). These proposed amendments were intended to clarify that the amount of the posted bond must cover the number of gallon RINs that are sold and/or transferred, and also those RINs held and/or obtained by the foreign entity, including those held and/or obtained to comply with a foreign importer's RVO requirements. We also proposed to amend §§80.1465-80.1467 by striking §§80.1465(h)(2)(iii), 80.1466(h)(2)(iii) and 80.1467(e)(2)(iii), which allowed entities to make alternative commitments in lieu of posting bonds. EPA believes that this method is vague, unnecessary, and unenforceable.

One commenter at the hearing is against the removal of the regulation allowing foreign producers to make alternative commitments as it may discourage foreign renewable fuel producers from entering the U.S. market. EPA disagrees as no foreign producer has used an alternative commitment to date, and most foreign renewable fuel producers do not post bonds and instead rely on the renewable fuel importers to generate RINs for renewable fuel that is imported. For those reasons and the reasons described above, we are finalizing the proposed changes to the bond posting regulations as proposed.

4. Prohibition Against Repeat Generation of RINs

We are finalizing our proposal to add a new paragraph (b)(6) to the prohibited acts of §80.1460 to specify in this section of the regulations that RINs may not be generated for any fuel for which RINs have previously been generated. Pursuant to §80.1401, a RIN is a unique number generated to represent a volume of renewable fuel. If more than one RIN is generated for a particular volume, the RIN will no longer be unique, and is therefore improperly generated and cannot be used to demonstrate compliance with the renewable volume obligations. While generating RINs for a particular volume of fuel for which RINs have already been generated is already prohibited, we are amending the regulations to include this prohibition in § 80.1460 for clarity.

5. Acceptance of Separated Yard Waste and Food Waste Separation Plans

We proposed to amend §80.1426(f)(5)(ii)(A) to remove the requirement that the separated yard waste plan and separated food waste plan must be approved by EPA, and instead only require that these two plans be submitted and accepted by EPA under the registration procedures specified in §80.1450(b)(1)(vii). The details and information required to be submitted in the separated yard waste plan and separated food waste plan are not overly burdensome or complex, and therefore we believe it does not warrant a specific EPA approval, but that EPA acceptance of these plans through the registration procedures is sufficient.

We received comments that supported the adoption of this amendment for separated food waste plan and separated yard waste plan. We also received comments suggesting that we also adopt this amendment for the separated MSW plan. The commenter stated that although the separated MSW plan requires somewhat more information than the separated yard and food waste plans, the same logic applies in that the separated MSW plan will also be subject to EPA review as part of the producer's registration process and therefore requiring a separate duplicate approval for the separated MSW plan is not necessary.

First, we would like to clarify that there is not a duplicate approval process for the separated MSW plan that serves as a separate additional requirement for the producer's registration. Similar to the proposed acceptance process for the producer's separated yard and food waste plan, the approval process for the producer's separated MSW plan will equally serve as verification of compliance as part of the producer's registration. Secondly, we disagree with the commenter that the separated MSW plan only requires somewhat more information than the separated yard and food waste plans, and that the same logic applies in terms of the review process. For the separated MSW plan, producers are required to provide ongoing verification that there is separation of recyclable paper, cardboard, plastics, rubber, textiles, metals, and glass wastes to the extent reasonably practicable, including: the extent and nature of the recycling that occurred prior to receipt of the waste material, identification of available recycling technology and practices that are appropriate for removing recycling materials from the waste stream, and identification of the technology or practices selected for implementation, including an explanation for such selection, and reasons why other technologies or practices were not

implemented. In addition, producers are also required to provide contracts relevant to materials recycled from municipal waste streams and certification that recycling is conducted in a manner consistent with goals and requirements of applicable State and local laws relating to recycling and waste management as part of their registration process. For the separated yard and food waste plan, the producers are only required to provide ongoing verification that the separated yard waste or food waste was kept separate since generation from other waste materials, and for food waste, contain only incidental amounts of other components. We believe the information submitted in the separated MSW plan will be considerably more complex than information submitted in the separated yard and food waste plans, and therefore, will require EPA conduct a much more comprehensive review and also consider many additional factors to ensure that the producer has met the all the requirements stipulated. Based on the factors discussed, we believe that it is not reasonable to apply the same proposed acceptance process for separated yard and food waste plan to the separated MSW plan.

Therefore, we are finalizing in this rulemaking only for separated yard waste plan and separated food waste plan to amend the requirement that the plans must be approved by EPA, and instead only require that the plans will be accepted by EPA under the registration procedures specified in §80.1450(b)(1)(vii).

6. Transferred Blendstocks in Early Benzene Credit Generation Calculations

Today's rule also finalizes one minor correction to the gasoline benzene regulations which would clarify how refiners should account for transferred blendstocks in their early benzene credit generation calculations. Under current rules, refineries which generated early benzene credits are required to reduce gasoline benzene during an early credit generation period by at least 10% compared to the refinery's benzene baseline, and are also required to make specific operational changes and/or improvements in benzene control technology to reduce gasoline benzene levels.⁴¹ Refineries which reduce their gasoline benzene by at least 10%, in part by transferring reformate to another refinery, could also generate early benzene credits, provided the transferee refinery treated the reformate in specific benzene-reduction processing units.⁴² See 72 FR 8486-87 (Feb. 26, 2007). However, the gasoline benzene regulations also contain an additional provision that requires all blendstock streams transferred to, from or between refineries to be excluded from a refinery's early credit generation calculations (except for reformate as described previously). This led to an inconsistent comparison of a refinery's benzene during an early credit generation period with a refinery's benzene baseline (which included blendstocks transferred to the refinery), which was not EPA's intent.

As described in the preamble of the gasoline benzene final rule, EPA intended that refineries not be allowed to generate early benzene credits exclusively through blendstock trading, without making any other qualifying reductions (see 72 FR 8487), but that refineries could generate early benzene credits in part through qualifying reductions and "in part" through other means such as blendstock transfers (see 72 FR 8496-97). However, the current regulations

⁴¹ Early credit generation periods were July 1, 2007 through December 31, 2007, and calendar years 2008, 2009 and 2010.

⁴² Refineries produce gasoline by combining several different blendstocks produced by various refinery processing units. Reformate is a blendstock which contains approximately 80% of all benzene found in gasoline, per the MSAT2 regulatory impact analysis.

do not allow this approach, and this inconsistency has caused confusion among refiners about how to calculate the amount of early credits generated. Refiners have generally followed the approach set out in the preamble (as EPA in fact intended), and included all blendstocks transferred to a refinery in the refinery's early credit generation calculations. Refiners typically keep records on transferred blendstocks for 1-2 years, and thus do not have sufficient data to exclude transferred blendstocks from their early credit generation calculations.

EPA recently became aware of this inconsistency and is amending the regulations to make them consistent with EPA's intent as described in the preamble. This rule amends the gasoline benzene regulations at 40 CFR 80.1275(d)(3) by deleting that provision. This will allow a refinery to include blendstocks transferred to the refinery in the refinery's early benzene credit generation calculations (all other conditions, including treatment which removes benzene in transferred reformat streams still applying, of course). Consistent with EPA's original intent, today's rule also allows a refinery to include transferred blendstocks in past early credit generation calculations, provided the refinery met all of the other requirements for generating early benzene credits. EPA is finalizing this change to include transferred blendstocks in past early credit generation calculation not only because this was EPA's intent at the time of the benzene gasoline rulemaking, but because some refiners have reasonably relied upon that stated intent in devising their compliance strategies.

All of the comments received on this change to the regulations were in support of this change. Commenters generally noted that the change was needed in order to align the language in the regulations with the intent stated in the preamble.

V. Annual Administrative Announcements

In the RFS2 final rule, we stated our intent to make two announcements each year:

- Set the price for cellulosic biofuel waiver credits that will be made available to obligated parties in the event that we reduce the volume of cellulosic biofuel below the applicable volume specified in the Clean Air Act (CAA), and
- Announce the results of our annual assessment of the aggregate compliance approach for U.S. planted crops and crop residue.

The biofuel waiver credit price being announced today was calculated in accordance with the specifications in §80.1456(d). Since the manner in which EPA calculates the waiver credit price is precisely set forth in EPA regulations (which were issued through a notice-and-comment process), and since some of the variables necessary to compute the price have only recently become available, EPA did not propose a waiver credit price for comment. Similarly, because EPA's assessment of the aggregate compliance approach announced today was conducted using data sources, methodology, and criteria that were identified and explained in the preamble to the RFS2 final rule, it was not necessary to present a preliminary annual assessment for comment in the NPRM.

A. 2011 Price for Cellulosic Biofuel Waiver Credits

Section 211(o)(7)(D) of the CAA requires that whenever EPA sets the applicable volume of cellulosic biofuel at a level lower than that specified in the Act, EPA is to provide a number of cellulosic credits for sale that is no more than the EPA-determined applicable volume. Congress also specified the formula for calculating the price for such waiver credits: adjusted for inflation, the credits must be offered at the price of the higher of 25 cents per gallon or the amount by which \$3.00 per gallon exceeds the average wholesale price of a gallon of gasoline in the United States.⁴³ The inflation adjustment is for years after 2008. EPA regulations provide that the inflation adjustment is calculated by comparing the most recent Consumer Price Index for All Urban Consumers (CPI-U) for the “All Items” expenditure category as provided by the Bureau of Labor Statistics that is available at the time EPA sets the cellulosic biofuel standard to the comparable value that was reported soonest after December 31, 2008.⁴⁴

In contrast to its directions to EPA for setting the price of a cellulosic biofuel waiver credit, Congress afforded the Agency considerable flexibility in designing regulations specifying the permissible uses of the credits. The CAA states that EPA regulations “shall include such provisions, including limiting the credits’ uses and useful life, as the Administrator deems appropriate to assist market liquidity and transparency, to provide appropriate certainty for regulated entities and renewable fuel producers, and to limit any potential misuse of cellulosic biofuel credits to reduce the use of other renewable fuels, and for such other purposes as the

⁴³ More information on wholesale gasoline prices can be found on the Department of Energy's (DOE), Energy Information Administration's (EIA) Web site at:
http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMA_EPM0_PBR_NUS_DPG&f=M

⁴⁴ See U.S. Department of Labor, Bureau of Labor Statistics (BLS), Consumer Price Index Web site at:
<http://www.bls.gov/cpi/>

Administrator determines will help achieve the goals of this subsection.” The final RFS2 regulations provide a detailed discussion of how we designed the provisions for cellulosic biofuel waiver credits in keeping with the statutory language. In short, 2012 cellulosic biofuel waiver credits (or ”waiver credits”) are only available for the 2012 compliance year. Waiver credits will only be made available to obligated parties, and they are nontransferable and nonrefundable. Further, obligated parties may only purchase waiver credits up to the level of their cellulosic biofuel RVO less the number of cellulosic biofuel RINs that they own. A company owning cellulosic biofuel RINs and cellulosic waiver credits may use both types of credits if desired to meet their RVOs, but unlike RINs, waiver credits may not be carried over for use in the next calendar year. Obligated parties may not use waiver credits to meet a prior year deficit obligation. Finally, unlike cellulosic biofuel RINs which may also be used to meet an obligated party's advanced and total renewable fuel obligations, waiver credits may only be used to meet a cellulosic biofuel RVO. An obligated party will still need to additionally and separately acquire RINs to meet their advanced biofuel and total renewable fuel obligations.

For the 2012 compliance period, since the applicable volume of cellulosic biofuel used to set the annual cellulosic biofuel standard is lower than the volume for 2012 specified in the CAA, we are making cellulosic waiver credits available to obligated parties for end-of-year compliance should they need them at a price of \$0.78 per credit. To calculate this price, EPA first determined the average wholesale (refinery gate) price of gasoline using the most recent 12 months of data available from the EIA website on September 30, 2011. Based on this data, we calculated an average price of gasoline for the period July 2010 to June 2011 of \$2.44. In accordance with the Act, we then calculated the difference of the inflation-adjusted value of

\$3.00, or \$3.22, and \$2.44, which yielded \$0.78. Next, we compared the value of \$0.78 to the inflation-adjusted value of \$0.25, or \$0.27. The Act requires EPA to use the greater of these two values as the price for cellulosic biofuel waiver credits.

The derivation of this value is more fully explained in a memorandum submitted to the docket for this rulemaking,⁴⁵ and a more complete description of the statutory requirements and their application can be found in the RFS2 final rule.⁴⁶ The price for the 2013 compliance period, if necessary, will be set when we announce the 2013 cellulosic biofuel standard.

B. Assessment of the Domestic Aggregate Compliance Approach

The RFS2 regulations contain a provision for renewable fuel producers who use planted crops and crop residue from U.S. agricultural land that relieves them of the individual recordkeeping and reporting requirements concerning the specific land from which their feedstocks were harvested. To enable this approach, EPA established a baseline number of acres for U.S. agricultural land in 2007 (the year of EISA enactment) and determined that as long as this baseline number of acres was not exceeded, it was unlikely that new land outside of the 2007 baseline would be devoted to crop production based on historical trends and economic considerations. We therefore provided that renewable fuel producers using planted crops or crop residue from the U.S. as feedstock in renewable fuel production need not comply with the individual recordkeeping and reporting requirements related to documenting that their feedstocks

⁴⁵ See memo to docket number EPA-HQ-OAR-2010-0133 from Scott Christian, on the subject of “Calculating the price for cellulosic biofuel waiver credits,” dated September 30, 2011.

⁴⁶ 75 FR 14726 - 14728

are renewable biomass, unless EPA determines through one of its annual evaluations that the 2007 baseline acreage of agricultural land has been exceeded.

In the final RFS2 regulations, EPA committed to make an annual finding concerning whether the 2007 baseline amount of U.S. agricultural land has been exceeded in a given year and publish this finding in the **Federal Register** by November 30 of the same year. If the baseline is found to have been exceeded, then producers using U.S. planted crops and crop residue as feedstocks for renewable fuel production would be required to comply with individual recordkeeping and reporting requirements to verify that their feedstocks are renewable biomass.

Based on data provided by the USDA Farm Service Agency (FSA) and Natural Resources Conservation Service (NRCS), we have estimated that U.S. agricultural land reached approximately 392 million acres in 2011, and thus did not exceed the 2007 baseline acreage. This acreage estimate is based on the same methodology used to set the 2007 baseline acreage for U.S. agricultural land in the RFS2 final rulemaking. Specifically, we started with FSA crop history data for 2011, from which we derived a total estimated acreage of 392 million acres. We then subtracted the amount of land estimated to be participating in the Grasslands Reserve Program (GRP) and Wetlands Reserve Program (WRP) by the end of Fiscal Year 2011, 275,000 acres, to yield an estimate of approximately 392 million acres of U.S. agricultural land in 2011. The USDA data used to make this calculation can be found in the docket to this rule.

C. Assessment of the Canadian Aggregate Compliance Approach

On March 15, 2011, EPA issued a notice of receipt of and solicited public comment on a petition for EPA to authorize the use of an aggregate approach for compliance with the Renewable Fuel Standard renewable biomass requirements, submitted by the Government of Canada. The petition requested that EPA determine that an aggregate compliance approach will provide reasonable assurance that planted crops and crop residue from Canada meet the definition of renewable biomass. After through consideration of the petition, all supporting documentation provided and the public comments received, EPA determined that the criteria for approval of the petition were satisfied and approved the use of an aggregate compliance approach to renewable biomass verification for planted crops and crop residue grown in Canada.

The Government of Canada utilized several types of land use data to demonstrate that the land included in their 124 million acre baseline is cropland, pastureland or land equivalent to U.S. Conservation Reserve Program land that was cleared or cultivated prior to December 19, 2007, and was actively managed or fallow and nonforested on that date (and is therefore RFS2 qualifying land). The total agricultural land in Canada in 2011 is estimated at 121 million acres. This total agricultural land area includes 95.6 million acres of cropland and summer fallow, 15.6 million acres of pastureland and 9.8 million acres of agricultural land under conservation practices. This acreage estimate is based on the same methodology used to set the 2007 baseline acreage for Canadian agricultural land in the RFS2 response to petition. The data used to make this calculation can be found in the docket to this rule.

VI. Comments Outside the Scope of This Rulemaking

In their comments responding to the NPRM, a number of parties used the opportunity to raise concerns that were not directly related to the issues and provisions we were addressing in the NPRM, such as the proposed standards for 2012, the applicable volume of biomass-based diesel for 2013, and the various proposed changes to the regulations designed to clarify intent and streamline implementation. Neither did these comments address setting the price for cellulosic biofuel credits or EPA's annual evaluation of the U.S. aggregate compliance approach for renewable biomass. In some cases, commenters requested EPA action in some other area, such as the following:

- Request for EPA to implement a more robust biofuel quality assurance program
- Request for EPA to mandate that 50% of all vehicles be E100 capable by 2017
- Request for EPA to encourage legislation that allows corn ethanol to be categorized as advanced biofuel
- Request for EPA to pursue changes to the statute that would make valid renewable fuels feedstock-neutral

In other cases, commenters raised issues related to other areas not addressed in our NPRM, such as the following:

- Other state and federal fuel regulations
- Retail dispensing requirements and misfueling of E15 in non-flexible fueled vehicles
- Need for continuing federal incentives for biofuels, such as tax subsidies
- Relative energy security implications of imported petroleum versus imported biofuels
- Delayed RINs
- Definition of heating oil

While we are taking these comments under consideration as we continue to implement the RFS2 program, these comments are outside the scope of today's action. In some cases, they are also outside our authority. Thus, we are not providing substantive responses to them at this time.

We also received comments in a number of other areas that, while outside the scope of this rulemaking, we believe would benefit from a response to clarify our position and/or intentions. These issues are addressed below.

One commenter provided a copy of a copyrighted report, "Energy Life-Cycle Assessment Of Soybean Biodiesel Revisited". Similarly, both Monsanto and RFA provided comments on the lifecycle GHG impacts of corn ethanol, indicating that it should be a higher GHG reduction than what was calculated by EPA as part of the RFS2 final rule and that we should reevaluate corn ethanol lifecycle emissions based on new studies that are available. Another commenter requested that we investigate the GHG impacts of the oleochemical industry increasing the use of palm oil as a feedstock as animal fats are increasingly diverted to the production of biofuels. We will consider the information and analyses provided as part of any future updates to our lifecycle evaluations of these biofuels.

Another commenter urged EPA to quickly certify additional feedstocks for cellulosic biofuels under the RFS. We are moving forward responding to a series of petitions requesting EPA approval of other pathways, including both feedstock-specific pathways (e.g., palm oil and sorghum) and company- or process-specific pathways. A discussion of the process involved and a list of the current pathways we are currently evaluating can be found at:

<http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/rfs2-lca-pathways.htm>

We appreciate that multiple stakeholders are highly interested in the timeline on which EPA is conducting these analyses. We note that the analysis required for the RFS fuel pathway determinations as required under CAA 211(o) are comprehensive in nature, and EPA is committed to ensuring they are conducted in an appropriately rigorous fashion.

Some commenters noted that regulated parties are having difficulty complying with the requirement that the RIN transfer date in EMTS and on product transfer documents (PTDs) be the actual title transfer date. Some of these commenters requested EPA enforcement discretion to allow biofuel producers and first purchasers to update their electronic systems in order to be in compliance with the title transfer date regulatory requirement. Two commenters specified that this enforcement discretion should be issued for six months in order to provide these companies with sufficient time to update their systems. EPA believes that the proposed enforcement discretion would likely introduce confusion for anyone who attempts to review and match transactions with records.

In contrast, several commenters requested that EPA reconsider its position that the RIN transfer date reported to EMTS and identified on PTDs must be the actual title transfer date. One commenter requested that EPA allow invoice dates to be used in lieu of title transfer dates as title transfer does not usually coincide with customer payments and ultimately place a burden on the selling company's cash flow. While we understand that some parties would prefer to use a date other than the true title transfer date for purposes of EMTS reporting and PTDs, we believe this would violate the clear language and intent of the regulations.

One commenter requested that EPA provide adjustment mechanisms to allow corrections in EMTS after noting that EMTS is a "forward looking" system, meaning that EMTS transactions cannot be modified once submitted. EPA is looking at several ways and has updated the RFS2 remedial action webpage since the comment period closed. EPA will continually update its guidance for regulated parties to correct violations that true mistakes on the following webpage:

<http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/rfs2remedialactions.htm>

Additionally, in this rule, EPA is finalizing a regulation amendment giving EPA discretion to allow invalidly generated RINs to be used for compliance purposes on a case-by-case basis (see Section IV).

Several commenters requested that EPA edit Q&As 7.8 and 10.6 as they conflict with the regulations. EPA will review and make edits to the RFS2 Q&As in order to ensure agreement with the regulations as appropriate at a later date.

VII. Public Participation

Many interested parties participated in the rulemaking process that culminates with this final rule. This process provided opportunity for submitting written public comments following the proposal that we published on July 1, 2011 (76 FR 38844), and we considered these comments in developing the final rule. Public comments and EPA responses are discussed throughout this preamble.

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because it raises novel legal or policy issues. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

The economic impacts of the RFS2 program on regulated parties, including the impacts of the required volumes of renewable fuel, were already addressed in the RFS2 final rule promulgated on March 26, 2010 (75 FR 14670). This action finalizes the percentage standards applicable in 2012 based on the volumes that were analyzed in the RFS2 final rule. This action is also finalizing technical amendments to the RFS2 regulations that have been determined to have no adverse economic impact on regulated parties since they generally clarify existing requirements.

B. Paperwork Reduction Act

This action does not impose any new information collection burden. While there are three regulatory amendments in today's rule that affect the recordkeeping and reporting burdens for regulated parties, we believe that the information collections already approved for the RFS2 program's general recordkeeping and reporting requirements, or the information collection already under review, would also cover these technical amendments.

The regulatory changes are listed in Table VIII.B-1.

Table VIII.B-1

Technical Amendments Affecting Recordkeeping and Reporting

Section	Description
80.1449(a)	Amended Production Outlook Report due date; added allowance for unregistered renewable fuel producers and importers to submit Production Outlook Reports.
80.1450(b)(1)(vi)	Amended to require submission of additional evidence as part of registration to verify eligibility for exemptions in §80.1403(c) or (d).
80.1450(d)(1)-(d)(3)	Amended to add more specificity on when updates, addenda, or resubmittals are required for engineering reviews and to include references to foreign ethanol producers.

With regard to Production Outlook Reports, the change in due date is not expected to have any impact on the reporting burden. In addition, EPA recently prepared an Information Collection Request (ICR) document to permit the submission of voluntary Production Outlook Reports by domestic and foreign renewable fuels producers. The parties affected by the ICR are not regulated parties under the RFS2 program. The ICR has been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and may be identified by EPA ICR number 2409.01. Documents related to the ICR have been placed in docket number EPA-HQ-OAR-2005-0161, which is accessible at <http://www.regulations.gov>.

On October 14, 2010, EPA published a notice in the Federal Register announcing our intent to submit the proposed ICR for voluntary Production Outlook Reports to OMB for approval. (See 75 FR 63173). The 60-day comment period closed on December 14, 2010. No comments were received. On February 8, 2011, EPA published a Federal Register notice announcing submission of the ICR to OMB. Additional comments were solicited via an additional comment period through March 10, 2011.⁴⁷

The Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations at 40 CFR Part 80, Subpart M under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. This would include the following approved information collections (with OMB control numbers and expiration dates listed in parenthesis): “Renewable Fuels Standard Program: Petition and Registration” (OMB

⁴⁷ See “Agency Information Collection Activities; Submission to OMB for Review and Approval; Comment Request; Production Outlook Reports for Un-Registered Renewable Fuel Producers (New Collection),” 76 FR 6781 (February 8, 2011). The document identification number for this notice is EPA-HQ-OAR-2005-0161-3221. The document identification number for the supporting statement is EPA-HQ-OAR-2005-0161-3222.

Control Number 2060-0367, expires March 31, 2013); “Renewable Fuels Standard (RFS2)” (OMB Control Number 2060-0640, expires July 31, 2013); “Regulations of Fuels and Fuel Additives: 2011 Renewable Fuels Standard – Petition for International Aggregate Compliance Approach” OMB Control Number 2060-0655, expires February 28, 2014). Detailed and searchable information about these and other approved collections may be viewed on the Office of Management and Budget (OMB) Paperwork Reduction Act website, which is accessible at <http://www.reginfo.gov/public/do/PRAMain>. With regard to the technical amendments in §80.1450, we believe that these information collections already approved for the RFS2 program's general recordkeeping and reporting requirements would also cover the amendments in today's final rule.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA)

regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, we certify that this action will not have a significant economic impact on a substantial number of small entities. The impacts of the RFS2 program on small entities that are directly regulated under the RFS2 program were already addressed in the RFS2 final rule promulgated on March 26, 2010 (75 FR 14670). This rule simply:

- Reduces the applicable volume of cellulosic biofuels in 2012 based on our projection of 2012 production levels
- Establishes percentage standards for 2012 based either on this production projection (for cellulosic biofuels) or statutory levels (for advanced biofuels, biomass-based diesel, and total renewable fuel)
- Makes minor technical amendments to the regulations

Therefore, this action will not impose any additional requirements on small entities beyond those which have already been evaluated.

D. Unfunded Mandates Reform Act

This rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. This rule simply:

- Reduces the applicable volume of cellulosic biofuels in 2012 based on our projection of 2012 production levels
- Establishes percentage standards for 2012 based either on this production projection (for cellulosic biofuels) or statutory levels (for advanced biofuels, biomass-based diesel, and total renewable fuel)
- Makes minor technical amendments to the regulations

Thus, this action is not subject to the requirements of sections 202 or 205 of UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action only applies to gasoline, diesel, and renewable fuel producers, importers, distributors and marketers and makes relatively minor corrections and modifications to the RFS2 regulations. A summary of the concerns raised, and EPA's response to those concerns, is provided in this preamble.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). This rule will be implemented at the Federal level and impose compliance costs only on transportation fuel refiners, blenders, marketers, distributors, importers, exporters, and renewable fuel producers and importers. Tribal governments would be affected only to the extent they purchase and use regulated fuels. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets EO 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5-501 of the EO has the potential to influence the regulation. This action is not subject to EO 13045 because it does not establish an environmental standard intended to mitigate health or safety risks and because it implements specific standards established by Congress in statutes.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This rule is not a “significant energy action” as defined in Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action simply finalizes the annual standards for cellulosic biofuels for 2012 and clarifying changes and minor technical amendments to the regulations.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law 104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. This action does not relax the control measures on sources regulated by the RFS2 regulations and therefore will not cause emissions increases from these sources.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is not a “major rule” as defined by 5 U.S.C. 804(2). Therefore, this rule will be effective on the date of publication.

IX. Statutory Authority

Statutory authority for the rule finalized today can be found in section 211 of the Clean Air Act, 42 U.S.C. 7545. Additional support for the procedural and compliance related aspects of today's rule, including the recordkeeping requirements, come from sections 114, 208, and 301(a) of the Clean Air Act, 42 U.S.C. sections 7414, 7542, and 7601(a).

List of Subjects in 40 CFR Part 80

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Diesel fuel, Fuel additives, Gasoline, Imports, Labeling, Motor vehicle pollution, Penalties, Petroleum, Reporting and recordkeeping requirements.

Dated: _December 22, 2011._____

Lisa P. Jackson,

Administrator

For the reasons set forth in the preamble, 40 CFR part 80 is amended as follows:

PART 80—REGULATION OF FUELS AND FUEL ADDITIVES

1. The authority citation for part 80 continues to read as follows:

Authority: 42 U.S.C. 7414, 7542, 7545, and 7601(a).

§80.1275—[Amended]

2. In §80.1275, remove paragraph (d)(3).

3. Section 80.1401 is amended by revising the definitions of “Annual cover crop” and “Naphtha” to read as follows:

§ 80.1401 Definitions.

* * * * *

Annual cover crop means an annual crop, planted as a rotation between primary planted crops, or between trees and vines in orchards and vineyards, typically to protect soil from erosion and to improve the soil between periods of regular crops. An annual cover crop has no existing market to which it can be sold except for its use as feedstock for the production of renewable fuel.

* * * * *

Naphtha means a blendstock falling within the boiling range of gasoline which is composed of only hydrocarbons, is commonly or commercially known as naphtha, and is used to produce gasoline.

* * * * *

4. Section 80.1405 is revised to read as follows:

§ 80.1405 What are the Renewable Fuel Standards?

(a) (1) Renewable Fuel Standards for 2010.

- (i) The value of the cellulosic biofuel standard for 2010 shall be 0.004 percent.
- (ii) The value of the biomass-based diesel standard for 2010 shall be 1.10 percent.
- (iii) The value of the advanced biofuel standard for 2010 shall be 0.61 percent.
- (iv) The value of the renewable fuel standard for 2010 shall be 8.25 percent.

(2) Renewable Fuel Standards for 2011.

- (i) The value of the cellulosic biofuel standard for 2011 shall be 0.003 percent.
- (ii) The value of the biomass-based diesel standard for 2011 shall be 0.69 percent.
- (iii) The value of the advanced biofuel standard for 2011 shall be 0.78 percent.
- (iv) The value of the renewable fuel standard for 2011 shall be 8.01 percent.

(3) Renewable Fuel Standards for 2012.

- (i) The value of the cellulosic biofuel standard for 2012 shall be 0.006 percent.
- (ii) The value of the biomass-based diesel standard for 2012 shall be 0.91 percent.
- (iii) The value of the advanced biofuel standard for 2012 shall be 1.21 percent.
- (iv) The value of the renewable fuel standard for 2012 shall be 9.23 percent.

(b) EPA will calculate the value of the annual standards and publish these values in the Federal Register by November 30 of the year preceding the compliance period.

(c) EPA will calculate the annual renewable fuel percentage standards using the following equations:

$$\text{Std}_{\text{CB},i} = 100 * \frac{\text{RFV}_{\text{CB},i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$\text{Std}_{\text{EBD},i} = 100 * \frac{\text{RFV}_{\text{EBD},i} \times 1.5}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$\text{Std}_{\text{AB},i} = 100 * \frac{\text{RFV}_{\text{AB},i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$\text{Std}_{\text{RF},i} = 100 * \frac{\text{RFV}_{\text{RF},i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

Where:

$Std_{CB,i}$ = The cellulosic biofuel standard for year i , in percent.

$Std_{BBD,i}$ = The biomass-based diesel standard for year i , in percent.

$Std_{AB,i}$ = The advanced biofuel standard for year i , in percent.

$Std_{RF,i}$ = The renewable fuel standard for year i , in percent.

$RFV_{CB,i}$ = Annual volume of cellulosic biofuel required by 42 U.S.C. 7545(o)(2)(B) for year i , or volume as adjusted pursuant to 42 U.S.C. 7545(o)(7)(D), in gallons.

$RFV_{BBD,i}$ = Annual volume of biomass-based diesel required by 42 U.S.C. 7545 (o)(2)(B) for year i , in gallons.

$RFV_{AB,i}$ = Annual volume of advanced biofuel required by 42 U.S.C. 7545(o)(2)(B) for year i , in gallons.

$RFV_{RF,i}$ = Annual volume of renewable fuel required by 42 U.S.C. 7545(o)(2)(B) for year i , in gallons.

G_i = Amount of gasoline projected to be used in the 48 contiguous states and Hawaii, in year i , in gallons.

D_i = Amount of diesel projected to be used in the 48 contiguous states and Hawaii, in year i , in gallons.

RG_i = Amount of renewable fuel blended into gasoline that is projected to be consumed in the 48 contiguous states and Hawaii, in year i , in gallons.

RD_i = Amount of renewable fuel blended into diesel that is projected to be consumed in the 48 contiguous states and Hawaii, in year i , in gallons.

GS_i = Amount of gasoline projected to be used in Alaska or a U.S. territory, in year i , if the state or territory has opted-in or opts-in, in gallons.

RGS_i= Amount of renewable fuel blended into gasoline that is projected to be consumed in Alaska or a U.S. territory, in year i, if the state or territory opts-in, in gallons.

DS_i= Amount of diesel projected to be used in Alaska or a U.S. territory, in year i, if the state or territory has opted-in or opts-in, in gallons.

RDS_i= Amount of renewable fuel blended into diesel that is projected to be consumed in Alaska or a U.S. territory, in year i, if the state or territory opts-in, in gallons.

GE_i= The amount of gasoline projected to be produced by exempt small refineries and small refiners, in year i, in gallons in any year they are exempt per §§80.1441 and 80.1442.

DE_i= The amount of diesel fuel projected to be produced by exempt small refineries and small refiners in year i, in gallons, in any year they are exempt per §§80.1441 and 80.1442.

- (d) (1) The 2010 price for cellulosic biofuel waiver credits is \$1.56 per waiver credit.
- (2) The 2011 price for cellulosic biofuel waiver credits is \$1.13 per waiver credit.
- (3) The 2012 price for cellulosic biofuel waiver credits is \$0.78 per waiver credit.

5. Section 80.1415 is amended by revising paragraph (c)(2) to read as follows:

§ 80.1415 How are equivalence values assigned to renewable fuel?

* * * * *

(c) * * *

(2) The application for an equivalence value shall include a technical justification that includes all the following:

(i) A calculation for the requested equivalence value according to the equation in paragraph (c)(1) of this section, including supporting documentation for the value of EC used in the calculation such as a certificate of analysis from a laboratory that verifies the lower heating value in Btu per gallon of the renewable fuel produced.

(ii) For each feedstock, component, or additive that is used to make the renewable fuel, provide a description, the percent input, and identify whether or not it is renewable biomass or is derived from renewable biomass.

(iii) For each feedstock that also qualifies as a renewable fuel, state whether or not RINs have been previously generated for such feedstock.

(iv) A description of the renewable fuel and the production process, including a block diagram that shows all inputs and outputs at each step of the production process with a sample quantity of all inputs and outputs for one batch of renewable fuel produced.

* * * * *

6. Section 80.1426 is amended as follows:

a. By revising paragraph (f)(1).

b. By revising paragraph (f)(5)(ii).

§ 80.1426 How are RINs generated and assigned to batches of renewable fuel by renewable fuel producers or importers?

* * * * *

(f) * * *

(1) Applicable pathways. D codes shall be used in RINs generated by producers or importers of renewable fuel according to the pathways listed in Table 1 to this section, paragraph (f)(6) of this section, or as approved by the Administrator. In choosing an appropriate D code, producers and importers may disregard any incidental, de minimis feedstock contaminants that are impractical to remove and are related to customary feedstock production and transport. Tables 1 and 2 to this section do not apply to, and impose no requirements with respect to, volumes of fuel for which RINs are generated pursuant to paragraph (f)(6) of this section.

* * * * *

(5) * * *

(ii) (A) A feedstock qualifies under paragraph (f)(5)(i)(A) or (f)(5)(i)(B) of this section only if it is collected according to a plan submitted to and accepted by U.S. EPA under the registration procedures specified in §80.1450(b)(1)(vii).

(B) A feedstock qualifies under paragraph (f)(5)(i)(C) of this section only if it is collected according to a plan submitted to and approved by U.S. EPA.

* * * * *

7. Section 80.1429 is amended by revising paragraphs (b)(2) and (b)(9) introductory text to read as follows:

§ 80.1429 Requirements for separating RINs from volumes of renewable fuel.

* * * *

(b) * *

(2) Except as provided in paragraph (b)(6) of this section, any party that owns a volume of renewable fuel must separate any RINs that have been assigned to that volume once the volume is blended with gasoline or fossil-based diesel to produce a transportation fuel, heating oil, or jet fuel. A party may separate up to 2.5 RINs per gallon of blended renewable fuel.

* * * *

(9) Except as provided in paragraphs (b)(2) through (b)(5) and (b)(8) of this section, parties whose non-export renewable volume obligations are solely related to either the importation of products listed in §80.1407(c) or §80.1407(e) or to the addition of blendstocks into a volume of finished gasoline, finished diesel fuel, RBOB, or CBOB, can only separate RINs from volumes of renewable fuel if the number of gallon-RINs separated in a calendar year is less than or equal to a limit set as follows:

* * * *

8. Section 80.1431 is amended by adding a new paragraph (c) to read as follows:

§ 80.1431 Treatment of invalid RINs.

* * * *

(c) Notwithstanding paragraph (b) of this section, improperly generated RINs may be used for compliance provided that all of the following conditions and requirements are satisfied and the renewable fuel producer or importer who improperly generated the RINs demonstrates that the conditions and requirements are satisfied through the reporting and recordkeeping requirements set forth below, that:

(1) The number of RINs generated for a batch exceeds the number of RINs that should have been properly generated.

(2) The RINs were improperly generated as a result of a broken meter, an inadvertent temperature correction error, or an inadvertent administrative error.

(3) The renewable fuel producer or importer had in place at the time the RINs were improperly generated a quality assurance / quality control plan designed to ensure that process measuring equipment such as meters and temperature probes are properly maintained and to prevent inadvertent administrative errors.

(4) The renewable fuel producer or importer has taken any appropriate additional steps to prevent similar violations from occurring in the future.

(5) The improperly generated RINs have been transferred to another party.

(6) The renewable fuel producer or importer has not improperly generated RINs for the reasons described in paragraph (c)(2) of this section on more than five batches during any calendar year.

(7) All of the following remedial actions have been implemented within 30 days of the EMTS submission date of the improper RIN generation:

(i) The renewable fuel producer or importer retires an equal number of valid RINs with the same D Code and RIN year as the properly generated RINs, using an EMTS retire code of 110.

(ii) The renewable fuel producer or importer reports all the following information to EPA via EMTS, which EPA may make publicly available:

- (A) Company name.
- (B) Company ID.
- (C) Facility name.
- (D) Facility ID.
- (E) The date the renewable fuel was produced.
- (F) The date the RINs were originally generated.
- (G) The number of RINs generated.
- (H) The number of RINs improperly generated.
- (I) RIN year.
- (J) D codes of generated RINs.
- (K) Batch numbers.
- (L) EMTS Transaction ID of the original generation.
- (M) An explanation of how the violation occurred, and why the improperly generated RINs meet the criteria in paragraph (c)(2) of this section.
- (N) Steps taken to prevent similar violations from occurring in the future.
- (O) Information under paragraphs (c)(3), (c)(4), and (c)(5) of this section.
- (P) Any additional information the Administrator may require.

(8) The renewable fuel producer or importer maintains all records relating to the improper RIN generation and the associated remedial actions taken, including but not limited to any of the following:

- (i) All information regarding the generation of invalid RINs, including information that is sufficient to demonstrate that the improperly generated RINs meet the criteria in paragraph (c)(2) of this section.
 - (ii) Documents demonstrating that the renewable fuel producer or importer has implemented the quality control / quality assurance plan required in paragraph (c)(3) of this section, and has taken all appropriate additional steps to prevent similar violations from occurring in the future.
 - (iii) All correspondence with EPA.
 - (iv) All EMTS transactions (Generation, Buy, Sell and Retire).
 - (v) All Product Transfer Documents (PTDs).
- (d) If EPA determines that a renewable fuel producer improperly generated RINs but did not meet the requirements set forth in paragraph (c) of this section, then the requirements of paragraph (b) of this section apply from the moment that the invalid RINs were generated in EMTS. Once the RIN generator has identified improperly generated RINs to EPA, then EPA may remove these improperly generated RINs from EMTS.

9. Section 80.1449 is amended by revising paragraph (a) introductory text to read as follows:

§ 80.1449 What are the Production Outlook Report requirements?

(a) By June 1 of each year (September 1 for the report due in 2010), a registered renewable fuel producer or importer must submit and an unregistered renewable fuel producer may submit all of the following information for each of its facilities, as applicable, to EPA:

* * * * *

10. Section 80.1450 is amended by revising paragraphs (d)(1) through (d)(3) to read as follows:

§ 80.1450 What are the registration requirements under the RFS program?

* * * * *

(d) * * *

(1) Any producer of renewable fuel, and any foreign ethanol producer who makes changes to his facility that will allow him to produce renewable fuel, as defined in §80.1401 that is not reflected in the producer's registration information on file with EPA must update his registration information and submit a copy of an updated independent third-party engineering review on file with EPA at least 60 days prior to producing the new type of renewable fuel. The producer may also submit an addendum to the independent third-party engineering review on file with EPA provided the addendum meets all the requirements in paragraph (b)(2) of this section and verifies for EPA the most up-to-date information at the producer's existing facility.

(2) Any producer of renewable fuel and any foreign ethanol producer who makes any other changes to a facility that will affect the producer's registration information but will not affect the

renewable fuel category for which the producer is registered per paragraph (b) of this section must update his registration information 7 days prior to the change.

(3) All producers of renewable fuel and foreign ethanol producers must update registration information and submit an updated independent third-party engineering review according to the schedule in paragraph (d)(3)(i) or (d)(3)(ii) of this section, and including the information specified in paragraph (d)(3)(iii) of this section:

(i) For all producers of renewable fuel and foreign ethanol producers registered in calendar year 2010, the updated registration information and independent third-party engineering review shall be submitted to EPA by January 31, 2013, and by January 31 of every third calendar year thereafter; or

(ii) For all producers of renewable fuel and foreign ethanol producers registered in any calendar year after 2010, the updated registration information and independent third-party engineering review shall be submitted to EPA by January 31 of every third calendar year after the first year of registration.

(iii) In addition to conducting the engineering review and written report and verification required by paragraph (b)(2) of this section, the updated independent third-party engineering review shall include a detailed review of the renewable fuel producer's calculations used to determine V_{RIN} of a representative sample of batches of each type of renewable fuel produced since the last registration. The representative sample shall be selected in accordance with the sample size guidelines set forth at §80.127.

* * * * *

11. Section 80.1451 is amended by revising paragraph (a)(1)(xi) to read as follows:

§ 80.1451 What are the reporting requirements under the RFS program?

(a) * * *

(1) * * *

(xi) A list of all RINs generated prior to July 1, 2010 that were retired for compliance in the reporting period.

* * * * *

12. Section 80.1452 is amended revising paragraphs (b)(2), (b)(4), and (b)(5) to read as follows:

§ 80.1452 What are the requirements related to the EPA Moderated Transaction System (EMTS)?

* * * * *

(b) * * *

(2) The EPA company registration number of the renewable fuel producer or foreign ethanol producer, as applicable.

* * * * *

(4) The EPA facility registration number of the facility at which the renewable fuel producer or foreign ethanol producer produced the batch, as applicable.

(5) The EPA facility registration number of the importer that imported the batch, if applicable.

* * * * *

13. Section 80.1460 is amended by adding a new paragraph (b)(6) to read as follows:

§ 80.1460 What acts are prohibited under the RFS program?

* * * * *

(b) * * *

(6) Generate a RIN for fuel for which RINs have previously been generated.

* * * * *

14. Section 80.1464 is amended as follows:

- a. By revising paragraph (a)(2) heading and paragraph (a)(2)(i).
- b. By adding paragraphs (a)(2)(iii) and (a)(2)(iv).
- c. By revising paragraph (a)(3)(ii).
- d. By revising paragraph (b)(2) heading and paragraph (b)(2)(i).
- e. By adding paragraphs (b)(2)(iii) and (b)(2)(iv).
- f. By revising paragraph (b)(3)(ii).
- g. By revising paragraph (c)(1) heading.
- h. By adding paragraphs (c)(1)(iii) and (c)(1)(iv).

§ 80.1464 What are the attest engagement requirements under the RFS program?

* * * * *

(a) * * *

(2) RIN transaction reports and product transfer documents.

(i) Obtain and read copies of a representative sample, selected in accordance with the guidelines in §80.127, of each RIN transaction type (RINs purchased, RINs sold, RINs retired, RINs separated, RINs reinstated) included in the RIN transaction reports required under §80.1451(a)(2) for the compliance year.

* * * * *

(iii) Verify that the product transfer documents for the representative samples under paragraph (a)(2)(i) of this section of RINs sold and the RINs purchased contain the applicable information required under §80.1453 and report as a finding any product transfer document that does not contain the required information.

(iv) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (a)(2)(iii) of this section and report as a finding any exceptions.

(3) * * *

(ii) Obtain the database, spreadsheet, or other documentation used to generate the information in the RIN activity reports; compare the RIN transaction samples reviewed under paragraph (a)(2) of this section with the corresponding entries in the database or spreadsheet and report as a finding any discrepancies; compute the total number of current-year and prior-year RINs owned at the start and end of each quarter, purchased, separated, sold, retired and

reinstated, and for parties that reported RIN activity for RINs assigned to a volume of renewable fuel, the volume and type of renewable fuel (as defined in §80.1401) owned at the end of each quarter; as represented in these documents; and state whether this information agrees with the party's reports to EPA.

(b) * * *

(2) RIN transaction reports and product transfer documents.

(i) Obtain and read copies of a representative sample, selected in accordance with the guidelines in §80.127, of each transaction type (RINs purchased, RINs sold, RINs retired, RINs separated, RINs reinstated) included in the RIN transaction reports required under §80.1451(b)(2) for the compliance year.

* * * * *

(iii) Verify that the product transfer documents for the representative samples under paragraph (b)(2)(i) of this section of RINs sold and the RINs purchased contain the applicable information required under §80.1453 and report as a finding any product transfer document that does not contain the required information.

(iv) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (b)(2)(iii) of this section and report as a finding any exceptions.

(3) * * *

(ii) Obtain the database, spreadsheet, or other documentation used to generate the information in the RIN activity reports; compare the RIN transaction samples reviewed under paragraph (b)(2) of this section with the corresponding entries in the database or spreadsheet and report as a finding any discrepancies; report the total number of each RIN generated during each quarter and compute and report the total number of current-year and prior-year RINs owned at

the start and end of each quarter, purchased, separated, sold, retired and reinstated, and for parties that reported RIN activity for RINs assigned to a volume of renewable fuel, the volume of renewable fuel owned at the end of each quarter, as represented in these documents; and state whether this information agrees with the party's reports to EPA.

* * * * *

(c) * * *

(1) RIN transaction reports and product transfer documents.

* * * * *

(iii) Verify that the product transfer documents for the representative samples under paragraph (c)(1)(i) of this section of RINs sold and RINs purchased contain the applicable information required under §80.1453 and report as a finding any product transfer document that does not contain the required information.

(iv) Verify the accuracy of the information contained in the product transfer documents reviewed pursuant to paragraph (c)(1)(iii) of this section and report as a finding any exceptions.

* * * * *

15. Section 80.1465 is amended by revising paragraph (h)(2) to read as follows:

§ 80.1465 What are the additional requirements under this subpart for foreign small refiners, foreign small refineries, and importers of RFS–FRFUEL?

* * * * *

(h) * * *

- (2) Bonds shall be posted by any of the following methods:
- (i) Paying the amount of the bond to the Treasurer of the United States.
 - (ii) Obtaining a bond in the proper amount from a third party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign refiner, provided EPA agrees in advance as to the third party and the nature of the surety agreement.

* * * * *

16. Section 80.1466 is amended by revising paragraph (h)(2) to read as follows:

§ 80.1466 What are the additional requirements under this subpart for RIN-generating foreign producers and importers of renewable fuels for which RINs have been generated by the foreign producer?

* * * * *

(h) * * *

- (2) Bonds shall be posted by any of the following methods:
- (i) Paying the amount of the bond to the Treasurer of the United States.
 - (ii) Obtaining a bond in the proper amount from a third party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign producer, provided EPA agrees in advance as to the third party and the nature of the surety agreement.

* * * * *

17. Section 80.1467 is amended by revising paragraphs (e)(1), (e)(2), and (g)(2) to read as follows:

§ 80.1467 What are the additional requirements under this subpart for a foreign RIN owner?

* * * *

(e) * *

(1) The foreign entity shall post a bond of the amount calculated using the following equation:

$$\text{Bond} = G * \$ 0.01$$

Where:

Bond = Amount of the bond in U.S. dollars.

G = The total of the number of gallon-RINs the foreign entity expects to obtain, sell, transfer or hold during the first calendar year that the foreign entity is a RIN owner, plus the number of gallon-RINs the foreign entity expects to obtain, sell, transfer or hold during the next four calendar years. After the first calendar year, the bond amount shall be based on the actual number of gallon-RINs obtained, sold, or transferred so far during the current calendar year plus the number of gallon-RINs obtained, sold, or transferred during the four calendar years immediately preceding the current calendar year. For any year for which there were fewer than four preceding years in which the foreign entity obtained, sold, or transferred RINs, the bond shall be based on the total of the number of gallon-RINs sold or transferred so far during the current calendar year plus the number of gallon-RINs obtained, sold, or transferred during any immediately preceding calendar years in which the foreign entity owned RINs, plus the number

of gallon-RINs the foreign entity expects to obtain, sell or transfer during subsequent calendar years, the total number of years not to exceed four calendar years in addition to the current calendar year.

(2) Bonds shall be posted by any of the following methods:

(i) Paying the amount of the bond to the Treasurer of the United States.

(ii) Obtaining a bond in the proper amount from a third party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign RIN owner, provided EPA agrees in advance as to the third party and the nature of the surety agreement.

* * * * *

(g) * * *

(2) Any RIN that is obtained, sold, transferred, or held that is in excess of the number for which the bond requirements of this section have been satisfied is an invalid RIN under §80.1431.

* * * * *

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